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ORIGINAL ARTICLES.

THE DIFFERENTIAL DIAGNOSIS OF PELVIC AND ABDOMINAL DISEASES IN THE FEMALE.

BY PAUL F. MUNDÉ, M.D.,

OF NEW YORK;

GYNECOLOGIST TO MT. SINAI HOSPITAL.

In no other part of the human frame is the recognition of the more complex forms of disease more difficult and confusing than in the female pelvis and abdomen, with, perhaps, the sole exception of the brain. At least so it appears to the gynecologist if he frankly admits the truth, and reviews with a dispassionate and humble spirit the many occasions where his experience and skill have failed him and the correct diagnosis has been revealed at the exploratory laparotomy, at the autopsy, or, if made during life, too late to benefit the patient.

I have admitted one of the two other great cavities of the body, that containing the brain, to be subject to the same difficulties of exploration and diagnosis as the abdominal and pelvic cavities, but I do not extend the same concession to the remaining cavity, that of the thorax, for the reason that it contains but two organs, the heart and the lungs, the diseased conditions of which are usually easily recognizable. In the pelvic and abdominal cavities, however, we have in the female not only the generative organs which in disease may invade the general abdominal cavity, but also the liver, gall-bladder, intestines, stomach, pancreas, spleen, and general peritoneum, to which should be added the kidneys and ureters which, though retroperitoneal, are subject to diseases simulating intraperitoneal conditions.

All these abdominal organs are in health so covered and protected as to be difficult of palpation; besides a not uncommon excessive adipose development and rigid or over-sensitive abdominal walls form additional obstacles, and the natural aversion of a modest woman to exposure of her person contributes a decided objection to an examination, which at the best can extend only to her external genital organs, vagina and cervix. Beyond that the same drawbacks apply which I have mentioned in the case of the abdominal viscera.

If, now, the gynecologist with his specially trained touch often finds himself unable to arrive at a satisfactory conclusion in regard to a doubtful case, the

general practitioner, and still less the specialist in some other branch, cannot be blamed if he fails to make the correct diagnosis, provided, of course, that he faithfully employs such knowledge and experience as he happens to possess and omits none of the usual methods of examination.

Before speaking of special instances of difficult differential diagnosis it may be well for me to say that an examination of other organs than those constituting the female sexual apparatus, especially the urinary and digestive tracts and their secretions should never be omitted when advice is sought for some supposed "female trouble." The bladder should be examined by bimanual palpation in regard to unusual sensitiveness which, if present, is generally found at the trigonum, between the mouths of the ureters; the ureters should be sought by the intravaginal finger, and can frequently be detected in health, and always if swollen or tender, as is commonly the case in pyelonephritis. I have even felt a stone impacted in the ureter, and by removing it through a vaginal incision have relieved a pyelonephrosis of the kidney which would otherwise have escaped discovery. The urine should be chemically and microscopically examined whenever there is the least suspicion of disturbance of the urinary organs, and if inspection or a superficial chemical examination in the office suggests possible organic vesical or renal disease, a specimen should be procured with the catheter and be sent to a competent urinologist for careful examination. Many a case of doubtful pelvic and abdominal pain for which the sexual organs proper offered no solution has thus been found to be due to pyelonephritis, renal calculi, cystitis, stone, or tumor in the bladder.

By a digital eversion of the rectum, easily performed with two fingers in the vagina, fissure of the anus, catarrh, and ulceration of that organ, internal hemorrhoids, polypus, or even pin-worms, may be readily exposed, and recognized as the cause of the pain in the sacral, coccygeal, and perineal regions, which was supposed to be due to some so-called "womb disease." If this digital eversion leads to a suspicion of disease higher up, a small cylindrical speculum, or two small Sims' specula inserted, if necessary, after the introduction of a tampon soaked in a four-per-cent. solution of cocaine, will permit inspection of the rectum nearly up to the sigmoid flexure.

The condition of the coccyx should also be investigated, and its mobility, direction, and tenderness tested. Mere pain in the coccyx, when unconnected with dislocation, fracture, or disease of its periosteum, is no evidence of pelvic disease, but usually a sign of general neurasthenia, and almost invariably associated with pain or ache in the favorite locations of that distressing affection, *viz.*: base of the sacrum, intrascapular, cervical, occipital, left parietal and supra-orbital, and left submammary regions. Pains complained of at all, or the majority of these points, may unhesitatingly be ascribed to neurasthenia, and need not by any means necessarily depend upon or even be associated with any pelvic disease whatever.

Further, it is well to bear in mind the peculiar mental and nervous organization of female patients in properly estimating the acuteness and gravity of their complaints. Some women, especially of the lower classes, systematically exaggerate their ailments and magnify every symptom; others, of the hysterical, hyperesthetic, neurotic temperament, really feel, or imagine they feel, pain here, there, and everywhere, for which a careful examination can find no cause.

Cutaneous hyperesthesia of certain parts of the abdomen, thorax, back, or limbs may simulate inflammatory conditions of deep-seated organs. If the painful or tender points are on the abdomen, peritonitis, appendicitis, salpingo oophoritis, metritis, or cystitis may be suspected, and their absence discovered only on examination under anesthesia. A hyperesthetic uterus, peritoneum, vagina, vulva, or excessively tender ovaries and tubes may likewise be mere nervous disturbances found frequently in neurotic, hysterical women.

Again, the explanation of the etiology of many pelvic, abdominal, and dorsal pains must be sought in the constipation to which the majority of women are subject, to colic, chronic colitis, fecal impaction, intestinal indigestion and fermentation, and worms. A curious instance recently came under my observation of a young lady who consulted me for pain in the rectum attended by mucous discharges. I found the sexual organs healthy, but the rectal mucous membrane intensely congested. On seeking for the cause of this congestion, I learned that the lady had for some months been taking daily enemata of very hot water to relieve constipation, they having been ordered by her physician. Before taking these hot enemata there had been no mucous discharge and I suspected the hot water to be the cause of the trouble. I ordered a discontinuance of the hot enemata, a daily enema at night of 4 ounces of olive oil and lime water, equal parts (which I have found an

excellent soothing remedy in catarrhal proctitis) to be retained, and a mild laxative, and requested her to report again in two weeks, when the discharges had ceased and the rectum was found normal. The lesson from this case is that the delicate mucous membrane of the rectum does not bear the unlimited hot douches which the comparatively tough cutaneo-mucous lining of the vagina not only endures with impunity, but even with complacency and benefit.

In proceeding to the consideration of our subject in detail, I know of no better way than to take up *seriatim* the most prominent diseased conditions of the female genital, pelvic, and abdominal organs, in which difficulty or error in diagnosis are most likely to occur. I shall not, of course, touch on all abnormal features, for that would carry me too far and prove unnecessary and wearisome.

Of diseases of the vulva I shall mention prominently that first described as *kraurosis* by the late Professor Breisky of Prague. This peculiar and rather rare affection may be mistaken most readily for eczema, indeed it has been so called by several eminent dermatologists. But it is essentially different. In eczema the skin is diffusely red, inflamed, scaly, dry or later moist; the eruption extends not only over the whole cutaneous portion of the vulva, but also may spread to the thighs, groins and abdomen. The inner surface of the labia is not affected. The pain is a burning, itching, scalding sensation.

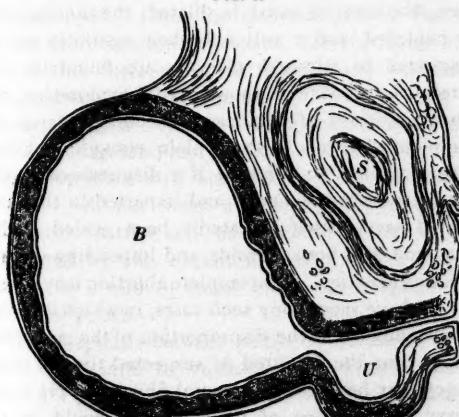
In kraurosis, the disease attacks chiefly the mucocutaneous surfaces, the clitoris, labia minora, vestibule, hymen, vaginal introitus, perineum and the anal border. The true skin itself I have never seen attacked elsewhere about the vulva. The diseased surface is not uniformly red, quite the reverse; it is covered with dry, white patches of different size, interspersed with irregular red spots; the surface cracks and bleeds easily; the whole tissue seems infiltrated with a white, cheesy matter which can be scraped away with the finger-nail until the red, underlying cutis vera is reached; the pain is sharp, darting, intense. Finally, eczema is usually easily cured by local applications, whereas kraurosis seldom yields to any remedy short of the excision of the diseased parts and the approximation of the healthy edges by sutures.

Deformities of the external genital organs, if congenital, are usually of the variety known as *androgyny* or man-woman, that is, the individual is of the masculine gender, possessing a short, hypospadiac penis, thick labia, each containing a testicle and epididymis; or one testicle may be in the groin and the other still in the pelvic cavity or abdomen; a vagina of greater or lesser depth, but of course no uterus or ovaries.

Far less common is the variety called *gynandry*, or woman-man, which is characterized solely by a hypertrophied clitoris, the rest of the external and internal sexual organs being distinctly feminine. There is no difficulty in distinguishing between these two forms of spurious hermaphroditism. More puzzling are the rare cases (there being only six on record) where the individual possesses every characteristic of a perfect woman, locally and generally, but has no uterus or ovaries, and instead in the labia, groins or abdomen on each side a testicle and epididymis. Only a microscopical examination of these, in life, doubtful organs can settle, and has in five of these six cases (mine being the exception) settled the question of their being testicles.

The urethra and bladder present two pathological conditions of diagnostic interest, *urethrocele* and *suburethral abscess*. Both are not very common and may be mistaken for one another and for cystocele, as well as for the natural urethral bulb. Urethrocele is a sacculation of the urethrovaginal septum; suburethral abscess is a collection of pus in the same septum. Both open into the urethra; the former by a large, the latter by a small, opening (see Figs. 1 and 2) which constitutes the difference between them, for both cause painful urination through the purulent decomposed urine which each cavity contains. The diagnosis is easily made by the catheter

FIG. 1.



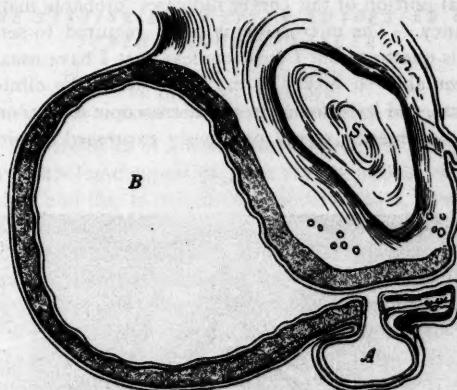
Sectional view of urethrocele, showing large opening into urethra. *B*, Bladder. *U*, Urethrocele. *S*, Symphysis.

or sound, which shows the size of the opening, and the existence of the abnormal pocket in the urethral wall, below the neck of the bladder. In cystocele the urethra is not involved in the prolapse, except in the worst cases, when the whole urethra and posterior bladder wall with the anterior vaginal wall protrude between the labia.

A cyst of the anterior vaginal wall may be mis-

taken for a cystocele. I have seen three such cases, in one of which I excised the cyst; in the second the patient had been treated with a pessary for cystocele by a physician who sent her to me at the Polyclinic where I easily detected the error, and demonstrated it by showing that the sound did not go to the bottom of the supposed cystocele; and the third case is a woman with a large intraligamentous ovarian

FIG. 2.



Sectional view of suburethral abscess, showing narrow opening into urethra. *A*, Abscess. *B*, Bladder. *S*, Symphysis.

cyst who refuses operation for the vaginal cyst as she says she has had it for thirty years and it does not trouble her.

The diagnosis of a *gonorrhea of the vagina, endometrium or endosalpinx* cannot be made by the eye nor the nose, for there is nothing distinctive about the appearance or odor of the discharge, nor the color of the vagina. The discharge is simply green, thin, irritating and pungent, like the secretion in an aggravated case of non-contagious endometritis and vaginitis. Only the discovery of the gonococcus would settle the diagnosis of gonorrhea, which the habits and associations of the woman might lead us to suspect. To accuse a respectable married woman of gonorrhea simply on the strength of an irritating, pungent, greenish, vaginal discharge, and an inflamed, eroded, "granular" (papillary) vaginitis, would be risky and likely to evolve a suit for defamation of character, against which there would be no satisfactory defense.

The diagnosis of *cancer of the cervix* is usually so easy that any tyro can make it. But in the early stage before the destruction of the diseased tissue has taken place, when there is no offensive putrid discharge, or before the cervix has swollen to the size and outline of a turnip or a cauliflower—when, in fact, the disease is in its infancy and nothing but prolonged menstruation or an intermenstrual oozing attracts the woman's attention, it may not be easy

to decide whether the swollen, ragged, bleeding lips of the cervix are merely due to a puerperal laceration, or to malignant disease. As a rule, in a benign case the tissues are hard and bleed but little on touch, whereas if the ulceration is malignant the finger can easily break down and crush portions of the cervix, and the bleeding is profuse although easily arrested. Besides, any extension of the ulceration to the vagina or enlargement of the supravaginal portion of the cervix indicates probable malignancy. The microscope is often required to settle this question, but I must confess that I have usually been able to make up my mind from the clinical facts, and have found in the microscopic reports only a confirmation of my previously expressed opinion.

FIG. 3.



Suburethral abscess. Showing drainage-tube through meatus urinarius and incision in the vagino-urethral septum.

A putrid, offensive discharge is *never* found with a simple lacerated cervix; it means gangrene, perhaps a decomposed piece of decidua, or a sloughing fibroid, or a malignant growth. Hence, such discharge from the uterine cavity calls for the curette, and possibly the microscopical examination of the scrapings. If feasible, it is always advisable to dilate the uterine canal sufficiently to enable the index-finger to pass through the internal os whenever the uterus is enlarged and it is desired to be sure that its cavity has been entirely cleared of the foreign substances for which the curetting was done. Even the largest curette which can be passed through such a canal does not afford absolute assurance on this

point, which can be given only by the finger. Hence, it is the finger upon which we must chiefly rely for the diagnosis of submucous fibroids and intra-uterine polypi; the sound is but a poor substitute.

Displacements of the uterus can generally be easily recognized by a finger experienced in detecting the normal position of that organ.

Bimanual palpation will distinguish an anteflexion or anteversion, or a retroflexion or retroversion from a fibroid in the anterior or posterior uterine wall, or from a tumor in Douglas' pouch. If necessary the sound will indicate the position of the body of the uterus. If there is a suspicion of pregnancy, however, the sound is forbidden, and then the diagnosis of the nature of the uterine enlargement may be difficult, or for a time impossible, and a second examination a month or so later may be required to decide whether the uterus has enlarged in accordance with the natural growth of pregnancy since the first examination.

It is particularly difficult to detect the true condition when a woman states that she has not skipped a recent menstrual period and has been bleeding more or less steadily for a month or two. The uterus is found enlarged, soft, outline perhaps slightly irregular, os not admitting finger; hemorrhage moderate. There is no suspicion of pregnancy. The diagnosis is submucous fibroid; the uterus is sounded, found to be four to five inches deep, the cervical canal is dilated, the uterine cavity explored, and a still unbroken amniotic sac or fragments of attached placenta are found; or the curette, introduced without digital exploration, removes portions of decidua. The diagnosis of incomplete abortion is then plain enough; but the situation is a trifle awkward if a diagnosis of fibroid has been made previously and imparted to the family. I have myself repeatedly been misled in this way, and still both fibroids and impending or progressing abortion, or incomplete abortion may co-exist. I have seen many such cases, in which it is well to remember that the disproportion of the size of the uterus from the admitted or suspected time of pregnancy may be due to intramural fibroids. Hydatidiform degeneration of the chorion should be remembered as another, perhaps somewhat less common, cause of protracted metrorrhagia with unusual size of the uterus which, in that case, is soft and flabby, not solid, as with fibroids.

While fibroids and unsuspected pregnancy may lead to an error of diagnosis, impaction of a retroverted pregnant uterus should never be overlooked if the examiner is ordinarily careful. Aside from the history, the soft, boggy, tender mass behind the cervix with which it is evidently continuous, the

absence of the uterine body above the pubis, the bearing-down or expulsive pains, should at least excite a suspicion as to the true nature of the case and induce the physician to attempt a reposition of the uterine body. Even a mistaken diagnosis, as proved by a failure of all the efforts at reposition, is preferable to a result such as I saw last autumn, when a woman was admitted to Mt. Sinai Hospital with a paralyzed, overflowing bladder full of putrid urine, and an impacted retroflexed uterus containing a decomposed ovum of three-months' growth. She stated that this condition of the bladder had existed for ten days. The woman was of course intensely septic. Emptying and constant irrigation of the bladder and uterus failed to remove the sepsis, and she died about four weeks later of septic pneumonia. She had been under the care of a physician whose name was not ascertained or asked.

I admit that an *impacted or adherent ovarian cyst in Douglas' pouch* might, under conditions of doubtful pregnancy, render a differentiation between it and an impacted gravid uterus difficult, but the ovarian cyst could hardly cause pain or be tender, and would not grow rapidly, and usually the uterus can be felt above the pubis. A retro-uterine hematocoele, with the history of pregnancy (the hematocoele being the result of a ruptured ectopic tube) might also be confusing, but again the uterine body above the pubis would be useful, and the sound might with due care be employed. Once the question settled that the uterus is in its normal position, the nature of a retro-uterine intraperitoneal tumor rests between a subperitoneal uterine fibroid, an ovarian cyst, an exudate of plastic lymph, a distended Fallopian tube, a blood coagulum, and possibly but rarely an intestinal loop filled with fecal matter, a so-called coprostasis. I do not mean a distended rectum, where the fecal matter can be indented or the scybalia separated by the examining finger, but a loop of ileum, or a fold of colon which has dropped into Douglas' pouch.

The diagnosis between pediculated fibroids of the uterus and solid or unusually firm multilocular or dermoid ovarian tumors, and between large ovarian polycysts and uterine fibro-cysts is often absolutely impossible, even to the most expert examiner, and errors are quite excusable. The length of the uterine cavity does not in my experience afford the valuable diagnostic evidence usually ascribed to it in distinguishing between uterine and ovarian tumors. In uterine fibroids the uterine cavity is generally supposed to be elongated; in non-uterine growths the uterus, too, maintains its normal depth of two and one-half inches. But I have repeatedly found the uterine cavity to measure but two and one-half to

three inches in fibroids which grew away from the center of the organ, whereas in ovarian tumors with short pedicle or in intraligamentous ovarian or parovarian cysts the uterus was drawn out to double its natural length. Again, however, I have seen the uterus unaffected in the latter cases. There is, therefore, no invariable rule in such cases.

(To be continued.)

THE STATISTICS OF FIFTY AUTOPSIES ON TUBERCULOUS SUBJECTS.

BY ALDRED SCOTT WARTHIN, M.D.,

OF ANN ARBOR, MICHIGAN;

INSTRUCTOR IN PATHOLOGY IN THE UNIVERSITY OF MICHIGAN.

THE statistics of a well-observed group of cases of any pathologic condition must always possess some value, and this is true still of tuberculosis, a disease that probably has received more attention at the hands of statisticians than any other, syphilis alone possibly, being excepted. Though the number of my cases is small the autopsies have been conducted with extreme care, the teaching-ideal being always kept in view. The material obtained from the autopsies has been carefully worked up and it is because of the thoroughness with which the cases have been studied that this report may acquire a certain value.

The fifty cases include forty-one cases of chronic pulmonary tuberculosis, seven cases of acute miliary tuberculosis, one case of tuberculous meningitis, and one case of general tuberculous lymphadenitis. The diagnosis in all of the cases was based upon the presence of the tubercle bacillus. The most important point to be noted in this report is the distribution of the lesions in the cases of chronic pulmonary tuberculosis.

Lungs.—About three-fourths of the cases were in females and one-fourth in males. Two-thirds of the cases were well-advanced, one-third being in early stages, death occurring from other complications. In all of the cases the chief lesions were in the upper lobes, the lower lobes being either normal or showing little disease. In no case were the lesions confined to one side; in two-thirds of the cases the disease was equally advanced on both sides; in one-third there was a greater involvement on the left side. No case was of the fibroid type; all showed extensive caseation and cavities.

Pleura.—In all of the cases there was widespread thickening of the pleura with numerous adhesions. In the majority of cases the pleurae over the diseased lobes were adherent throughout. Only very rarely was there any fluid exudate found. In one case caseating tubercles were found on the surface of the pleura and between the adherent surfaces.

Bronchial Glands.—In all of the forty-one cases there was extensive enlargement and caseation of the peribronchial lymph-glands.

Meninges.—Small scattered tubercles were found in the meninges in ten cases. The dura and pia were thickened and the subarachnoidal fluid was increased. There was no fibrinous exudate in any case.

Brain.—In three cases large solitary tubercles were found; in the cerebral cortex in two cases, in the ventricles and cerebellum in one case. Those in the lateral ventricles were attached by pedicles to the choroid plexus. All of these tubercles found in the brain presented on section a firm homogeneous surface having a distinct greenish color.

Nose.—In one case only were tuberculous lesions found in the nose. There was a widespread ulceration and caseation of the nasal mucosa involving the septum and lower turbinate bones. The base of the ulcer consisted of a tuberculous induration.

Tongue.—Tuberculous ulcers were found on the posterior surface of the dorsum in one case only.

Tonsils.—Caseating tubercles of small size were found in the tonsils in two cases.

Larynx.—In every case careful search revealed tuberculous lesions in the larynx. In many instances these were minute ulcers or erosions having a slightly indurated base, while in other cases there were large irregular ulcerations. Small nodular tubercles were found in some cases. The chief seat of the lesions was upon the arytenoids and the disease usually showed signs of progression upward rather than downward. In a number of cases it extended into the pharynx and in two cases the epiglottis was almost completely destroyed. In one case the process extended through the wall of the larynx and esophagus into the latter. The true vocal cords were affected in ten cases, the lesions consisting of miliary nodules situated on the upper and inner surface of the cords.

Trachea.—Numerous miliary tubercles were found in the mucosa in one case; in three others small tuberculous ulcers were present.

Cervical Glands.—Tuberculous in one case only of the forty-one.

Heart.—One case of tuberculous pericarditis was found, there being complete adhesion of the pericardial layers with multiple tuberculous nodules scattered through the heart-wall. The organ was enormously enlarged, the enlargement being due to hypertrophy of the heart-muscle and to the thickening caused by the growth of tuberculous tissue which surrounded the entire heart in a layer one-eighth to three-quarters of an inch in thickness firmly uniting the pericardial surfaces. The pulmonary disease in this case was overshadowed by that of the heart.

Tuberculous Thrombus of the Heart.—A thrombus the size of a large pea was found on the mitral ring in one case. On microscopic examination it was found to consist of a base of epithelioid tissue containing numerous giant-cells and showing a beginning caseation. Fibrin and red blood-cells were also present in the mass. Tubercle bacilli were demonstrated in it. Thrombi were found on the valves in ten per cent. of all the cases but unfortunately no microscopic examination was made of the others. The frequency of occurrence is striking.

Liver.—In every case of pulmonary tuberculosis tubercles could be found in the liver. In the early stages of the disease they were usually small and scarce; occasionally a large encapsulated one could be found. In all of the chronic cases the liver tubercles were more numerous and in many cases the picture was that of an acute miliary tuberculosis of the liver.

Spleen.—The condition found in the spleen was always similar to that found in the liver of the same subject. In the early stages the tubercles were small and scarce while in the more chronic cases they were more numerous, and in many of the older subjects there was the picture of an acute miliary tuberculosis of the spleen.

Kidney.—The kidneys contained tubercles in all of the forty-one cases, but the tuberculous lesions in this organ were always more scarce than in the liver or spleen. In early stages of the pulmonary disease solitary tubercles were usually found; in the chronic cases they were more numerous, occasionally so abundant as to give an appearance of acute miliary tuberculosis of the kidney. The metastasis in the kidneys, however, was never so marked as in the liver and spleen. In two cases the dilated pelvis contained tuberculous ulcers, and in one of these cases there was also tuberculosis of the ureter.

Adrenals.—In one case the right adrenal was found to contain large caseating tubercles. No signs of Addison's cachexia were present.

Bladder.—In one case where there were extensive lesions in the kidneys the mucosa of the bladder contained numerous miliary tubercles.

Male Genitals.—The testes, seminal vesicles, and prostate were tuberculous in one case only.

Female Genitals.—The Fallopian tubes and uterus showed extensive tuberculous lesions in three cases. There was caseation of the entire endometrium in each case, the cavity of the uterus being filled with a soft, yellowish, cheesy mass. In one of the cases isolated tubercles were also found scattered throughout the uterine wall. In one case the vaginal portion of the cervix and the mucosa of the vagina were covered with tuberculous ulcers.

Stomach.—Tuberculous ulceration was found in the mucosa of the stomach in one case.

Duodenum.—In two cases very large tuberculous ulcers were found in the mucosa of the duodenum.

Small Intestine.—In thirty-nine of the forty-one cases tuberculous ulcers were found in the mucous membrane of the small intestine. In one-third of these cases the lesions were small and situated chiefly in the lower portion of the ileum and around the ileocecal opening. When few ulcers were present they were invariably found at the latter location. In many cases the ulcers occupied the site of Peyer's patches, and were situated at regular intervals. Few ring-shaped ulcers were seen; in the majority of cases the long axis of the ulcer coincided with that of the intestine. No perforation was seen though in many cases the ulcers seemed just on the point of breaking through the serosa. Adhesions or thickenings of the serosa over the ulcers were rarely found.

Large Intestine.—Contained tuberculous ulcers in seven of the cases. In one case a tuberculous fistula was found in the rectum.

Appendix.—Tuberculosis of the appendix was found in two cases. In one large caseating tubercles were found in the extremity of the appendix. They appeared to be about to break through the serosa. Tuberculosis of the peritoneum and genital tract was present in this subject. In the other case the lumen of the appendix was obliterated by a firm tuberculous growth, no caseation being present. Peritoneal tuberculosis was present in this subject also.

Peritoneum.—Tuberculosis of the peritoneum was present in four cases—in two in association with tuberculosis of the Fallopian tubes and uterus, in one with tuberculous appendicitis and tuberculosis of the tubes and uterus, and in one with tuberculous appendicitis alone.

Mesenteric Glands.—These were tuberculous in every case in which there was tuberculosis of the small intestine.

Retroperitoneal Glands.—These were tuberculous in three cases.

Bones.—The vertebræ were tuberculous in two cases; in one the fourth and fifth lumbar, in the other the third and fourth dorsal were diseased. Tuberculosis of the pelvic bones, clavicle, and hip-joint was present in three cases. In the case in which there was tuberculosis of the clavicle several of the ribs were also diseased.

Mamma.—Tuberculosis of the mamma was present in one case, a large "cold abscess" being present in the left breast.

Skin.—In the case of tuberculosis of the mamma there were multiple tuberculous abscesses in the subcutaneous tissue of the abdomen, thorax, and neck.

Summary.—The relative rate per cent. of the distribution of the tuberculous lesions in the different organs would be approximately as follows:

Lung.....	100	per cent.	Prostate	2	per cent.
Pleura.....	100	"	Fallopian tubes.....	7	"
Meninges.....	24	"	Uterus.....	7	"
Brain.....	7	"	Vagina.....	2	"
Nose.....	2	"	Stomach.....	2	"
Tongue.....	2	"	Duodenum.....	4	"
Tonsils.....	4	"	Small intestine.....	95	"
Larynx.....	100	"	Large intestine.....	17	"
Cervical glands.....	2	"	Rectum.....	2	"
Heart.....	7	"	Appendix.....	4	"
Bronchial glands.....	100	"	Peritoneum.....	9	"
Liver.....	100	"	Mesenteric glands.....	95	"
Spleen.....	100	"	Retroperitoneal Glands.....	4	"
Kidneys.....	100	"	Bones.....	9	"
Adrenals.....	2	"	Mamma.....	2	"
Bladder.....	2	"	Skin.....	2	"
Testis.....	2	"			
Seminal vesicles.....	2	"			

Other pathologic conditions found in association with chronic pulmonary tuberculosis were:

Fatty infiltration of the liver in	100 per cent. of the cases.
Fatty infiltration of the heart	90 " " " "
Cloudy swelling of the renal epithelium	80 " " " "
Chronic congestion of the spleen	80 " " " "
Amyloid spleen	20 " " " "
Amyloid kidney	15 " " " "
Amyloid liver	4 " " " "

It will be seen, therefore, that in these forty-one cases of chronic tuberculosis of the lungs, in both the early and late stages, there was in every case extensive disease of the pleura, metastasis in the bronchial glands, liver, spleen, and kidneys, and secondary infection of the larynx, and in thirty-nine of the cases secondary infection of the small intestine and mesenteric glands. Though the number of the autopsies is small, and though it is possible that my cases may constitute a unique set, I cannot avoid believing that metastasis and secondary infection in chronic pulmonary tuberculosis play a much more important part than is usually believed, and that in practice the secondary lesions do not receive the attention which they deserve.

How much attention does the average practitioner give to the larynx in cases of chronic tuberculosis? Very little, I believe. Osler speaks of this neglect of the laryngeal complications and I am of the opinion that much might be added to the comfort of the tuberculous patient if more care were bestowed on the larynx. Means may be attempted to prevent infection of the upper air passages by instructing the patient to expectorate as soon as the sputum rises into the larynx. Many patients, in order to avoid expectoration, allow the sputum to accumulate in the larynx until forced to cough. Some attempt at local cleanliness or antisepsis might be of avail. The danger of secondary infection of the intestinal tract might be lessened if the dangers of swallowing sputum were more strongly emphasized.

The case of tuberculous meningitis and that of tuberculous lymphadenitis presented no unusual

features. Of the seven cases of acute miliary tuberculosis four were in males and three in females. The primary focus in each of the four cases in males was in the left seminal vesicle, the dissemination occurring through the veins in the tissue about the vesicles. Tubercles were found extending through the wall into the lumen of the vein. Two of these subjects showed signs of general infection almost immediately after the removal of the left testis, which was also tuberculous. In these two cases dissemination may have occurred through the spermatic veins also, though no evidence of this could be found. The primary focus in the other three cases was in a caseating mesenteric gland, the dissemination occurring through the thoracic duct.

The chief point of interest in these cases of acute miliary tuberculosis is the frequency with which the primary focus was found in the left seminal vesicle. In the majority of the articles in text-books on acute miliary tuberculosis the occurrence of the primary focus in the seminal vesicles is not mentioned.

EXPERIENCE WITH LITTEN'S DIAPHRAGM-PHENOMENON IN 220 CASES.

By RICHARD C. CABOT, M.D.,

OF BOSTON, MASS.;
PHYSICIAN TO THE OUT-PATIENT DEPARTMENT OF THE MASSACHUSETTS GENERAL HOSPITAL.

IN 1892¹ Litten made this observation: If a person lies with the feet pointing straight toward a window (cross lights being excluded) and the chest exposed, the following phenomenon can be observed during forced respiration: Along both axillæ a sort of shadow is seen to descend during deep inspiration from about the seventh to about the ninth rib, passing up again during expiration. It is best seen in spare, muscular, young persons of either sex. The observer should stand with his back to the light.

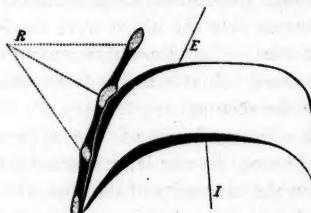
There can be no doubt that this phenomenon can be seen in all healthy people except those who are very fat, and those who cannot or will not breathe deeply. The latter condition occurs in hysteria and in some very stupid people who cannot seem to sufficiently understand what is meant by a full breath and to take one. Litten has observed many thousand cases and never failed to see the diaphragm-shadow in healthy subjects except under the conditions just mentioned.

The phenomenon is nearly or entirely absent in the following conditions: (1) Fluid or air in the pleural cavity. (2) Obliteration of the pleural cavity by adhesions. (3) Advanced emphysema of the lungs. (4) Pneumonias of the lower lobe. (5) Intrathoracic tumors low down in the chest.

Subdiaphragmatic tumors or fluid accumulations do not impair the phenomenon unless they are of very great bulk. In a case of tumor of the liver weighing thirty-six pounds, and occasionally in very large collections of ascitic fluid, Litten has found the phenomenon absent. Paralysis of a phrenic nerve is also mentioned as a possible cause for absence of the diaphragm-shadow.

The process by which the phenomenon occurs is best understood by imagining a coronal section of the thorax as seen from the front. At the end of expiration a portion of the diaphragm lies flat against the inside of the thorax. During inspiration it "peels off" and allows the lower edge of the lung to come down into the chink between the diaphragm and thorax (see Fig. 1). This peeling off of the

FIG. 1.



Excursion of the diaphragm during forced respiration. *R.* Ribs. *E.* Position of diaphragm at end of expiration. *I.* Position of diaphragm at end of inspiration.

diaphragm from the inside of the thorax is most easily seen in the axillæ but can be made out all round the chest from spine to sternum. It corresponds with the entrance of the "complementary air" during forced inspiration. In quiet breathing it is rarely to be seen. The shadow travels on an average from $2\frac{1}{2}$ to 3 inches, according to Litten, or from about the seventh to about the ninth rib in the axilla. He observes no difference in the distinctness of the shadow on the two sides of the chest though Sweenson,¹ Martius,² and others have thought it more marked on the right. Similar shadows produced on the abdomen by the descent of the stomach, liver or colon were mentioned by Litten as occasionally visible and attention has recently been called to them anew by Pickler³. Martius points out that the shadow begins to move not with the beginning of inspiration but a little later.

The importance of the phenomenon in clinical medicine is due to the following facts: It gives us an easy and accurate measure of the volume or vital capacity of the lungs, enabling us to dispense with the use of the spirometer and of measurements of chest expansion. When the diaphragm-shadow

¹ Sweenson, "Tran. d. le. Soc. d. Med. d. Kiew," vol. ii., 1896.

² Martius, "Wien. Klin. Woch., p. 416, 1895.

³ Pickler, "Centralblatt für Inn. Med., September 10, 1898.

moves less than $2\frac{1}{2}$ inches during forced breathing, Litten considers the condition abnormal. Such abnormality may be due to general debility, in which case the shadow begins in the normal place (seventh space mid-axillary line) but descends less than $2\frac{1}{2}$ inches. In emphysema the excursion is likewise diminished, but in this disease the shadow begins further down than is normal, owing to the fact that the distended lung prevents the diaphragm from folding back against the chest-wall as much as it usually does. In the later months of pregnancy the excursion is likewise limited by the upward pressure of the pregnant uterus.

So far we have been considering *bilateral* abnormalities in the excursion of the diaphragm. We have mentioned earlier the fact that the presence of abnormal solids, fluids or gases in a pleural cavity abolishes the shadow on that side and this is sometimes of aid in the diagnosis of these conditions. The gradual expansion of a tied-up lung after pleuritic effusions or the contraction of an emphysematous lung as it improves can also be watched by means of the diaphragm-shadow. Litten has also insisted on the importance of the diaphragm-shadow in distinguishing subphrenic abscess from empyema and abdominal from thoracic tumors. Anything below the diaphragm except as has been stated, does not abolish the shadow. Bull¹ has not found this distinction to hold good with sufficient constancy to make it of practical diagnostic value. He also dissent from Litten's statement that the shadow can be seen in all healthy people, and states that he has repeatedly found it absent on one or both sides, and frequently restricted to an excursion of one-half an inch or an inch. He finds it less distinct in women and most distinct in children. Rumpf² looked for the shadow in seventy cases of phthisis at Davos and found it absent on the affected side in sixty-four of them. The remaining six were incipient cases. The shadow is not visible after the disease has extended down to the second rib in front and to the middle of the scapula behind. He does not consider it of much diagnostic value in phthisis.

Personal Experience.—With the assistance of Mr. Tileston and Mr. Osgood of the Harvard Medical School I made observations on 220 cases at the Out-Patient Department of the Massachusetts General Hospital during the summer of 1898. Our examining-room has but one window and the examining-table was kept always with its foot pointing to the window so that every patient who lay on it was in the best position for examination. The upper and lower limit of the dia-

phragm excursion was marked in every case with a skin pencil and the intervening distance measured and recorded at once.

These observations confirmed, so far as they went, the results obtained by Litten. In normal cases (102 tested) the excursion was from 5 to 9 centimeters (2 to $3\frac{1}{2}$ inches), depending more or less on how hard the patient was made to work over it. It did not seem best to make every patient breathe as deeply as he possibly could as there was some strain and fatigue connected with it. By "normal cases" is here meant those having no evidence of any disease in the chest which could be expected to retard the diaphragmatic movements. Under this heading I include such conditions as syphilis, typhoid, gonorrhœa, malaria, leucæmia, gastric cancer, adenoids, bronchitis, alcoholism, etc. In these 102 cases the shadow moved practically the same distance on the two sides of the chest, averaging 6 centimeters (2 $\frac{1}{2}$ inches) on the right and 5.9 centimeters on the left. In 50 cases the excursion was slightly greater on the right and in 32 cases greater on the left; in 30 cases it was equal. Slight differences of this kind may be accounted for by fatigue in case the right side is examined first.

Pleuritic Effusion.—In eleven cases of pleural effusion (two of them purulent) the shadow was entirely absent on the affected side and normal on the other.

Pleuritic Adhesions and Dry Pleurisy.—In three cases of acute dry pleurisy with pain and a friction rub and in five cases with a history and signs of old pleurisy with adhesions the shadow was absent or nearly so on the affected side and normal on the healthy side.

Emphysema.—Six cases of chronic bronchitis with emphysema and wheezing were examined. Two of these showed no shadow on either side, two showed none on the left and but slight on the right, and in the remaining two cases the excursion was limited though not altogether wanting on either side.

Phthisis.—Thirty cases of pulmonary tuberculosis with bacilli in the sputum were examined. In only one were the diaphragm's movements normal. The average excursion on the affected side was 2 centimeters ($\frac{3}{4}$ of an inch) in moderately advanced cases and 4.3 centimeters ($1\frac{1}{2}$ inches) in incipient cases, or an average of 2.1 centimeters ($\frac{7}{10}$ of an inch) in the whole series. Contrary to the results of Rumpf, even in very early cases, in which a few râles at one apex were the only physical signs, we found often distinct limitation of the diaphragmatic movements on the affected side. F. H. Williams has repeatedly called attention to the importance of the evidence given by a restriction of the movements of the diaphragm as seen by the Röntgen-rays. Our results

¹ Bull, *Norsk. Mag. f. Lægevid.*, No. x, 1896.

² Rumpf, *Berlin Klin. Woch.*, No. vi, 1897.

would seem to confirm this, and I desire especially to insist upon the fact that the diaphragm-shadow gives us a way of observing the diaphragmatic movements much more easily and cheaply than with the X-rays. Not every case of incipient phthisis showed any decrease in the Litten phenomenon, but in a majority of cases it was decreased and served to urge us to more careful study of the case.

In connection with this series of cases it was notable that not infrequently the shadow could only be brought out by making the patient *cough*. Here the attention not being fixed directly on the act of respiration the latter was better performed. The decrease or absence of the shadow in phthisis is probably due to the presence of pleuritic adhesions limiting the movements of the lung.

Cardiac Hypertrophy.—In three cases of valvular disease with marked enlargement of the heart to the left and downward the records show: (1) Mitral stenosis, right 3.5 centimeters ($1\frac{1}{4}$ inches), left 0; apex in seventh space. (2) Mitral stenosis and aortic disease, right 0, left 0; marked ascites and enlarged liver. (3) Mitral regurgitation, left 2.7 centimeters ($\frac{1}{2}$ of an inch). Whether the cardiac enlargement is really the cause of the limited action of the diaphragm in these cases I do not know. The cases are too few to warrant any conclusions and I record them for what they are worth. The rapid, shallow breathing in cases with ruptured compensation is not suited to bring out the shadow.

Debility and Muscular Weakness.—As the diaphragm phenomenon is due to muscular effort any condition involving muscular weakness or strong disinclination to exertion limits it markedly. This was exemplified in our series in a case of Addison's disease and in cases of debility and neurasthenia.

Obesity.—Our observations simply confirm those of others, that in the very fat, the shadow cannot as a rule be seen.

Subdiaphragmatic Tumors and Ascites.—In a case of cirrhosis of the liver in which the organ was palpable over a space a hand's breadth in width below the ribs and to the fifth rib above the shadow could still be seen to move an inch or more with respiration. Similar appearances were noted in a case of leucemia with great enlargement of the spleen. On the other hand, a very large collection of ascitic fluid in a case of uncompensated valvular disease made it impossible to detect any diaphragm-shadow.

Summary.—1. In 102 normal chests the diaphragm-shadow showed an average excursion of $2\frac{1}{3}$ inches on each side of the chest.

2. In 11 cases of pleuritic effusion, 5 cases of adherent pleura and 3 cases of acute dry pleurisy, the shadow was absent on the affected side.

3. In 6 cases of emphysema the shadow was either absent or nearly absent.

4. In 30 cases of phthisis the excursion of the diaphragm was diminished on the affected side (except in one case); even incipient cases may show this change.

5. Muscular weakness may greatly limit the excursion of the shadow. In obesity it is often missed. It may be obtained only during a fit of coughing.

6. Great enlargement of the liver or spleen may exist without abolishing the shadow, but a very large accumulation of ascitic fluid may render it invisible.

7. The diaphragm-shadow seems to render unnecessary the use of the X-rays in the investigation of diaphragmatic movements.

FOREIGN BODIES IN THE LARYNX.¹

BY CHARLES H. KNIGHT, M.D.,
OF NEW YORK.

ONE of the most interesting conditions likely to confront us general practitioners, as well as specialists, is that resulting from inspiration of a foreign body. The seriousness of the accident depends upon the shape and size of the object and upon its point of lodgment in the upper air-passages. A very large body, such as a bolus of food or a piece of meat, may fill the cavity of the larynx and cause fatal asphyxia. An irregular or sharp-pointed body like a fish-bone, a pin, or a piece of glass, may be detained in the larynx without interfering very much with the air-current. On the other hand, an object of moderate size with a smooth surface—a glass bead, a bean, a cork—is in danger of slipping through the glottis into a bronchus, where it may be a source of serious mischief. The variety of articles which have gained admission to the upper air-passages at various times is remarkable. Tooth-plates, puff-darts, a toy locomotive, a toy balloon, cockleburrs, coins, and pins of all kinds are found in the catalogue. In fact, almost no object that can be put in the mouth has escaped being inhaled into the air-passages. Children especially have a propensity for stuffing things into their various cavities, and when the mouth has been the situation chosen a deep inspiration preceding the act of laughing or of coughing is apt to carry the foreign body beyond reach.

The first symptoms of a foreign body in the larynx are violent paroxysms of cough, Nature's effort to expel the intruder, and suffocative attacks due to spasm of the larynx and not depending upon the size of the object. The subsequent course of events is very much influenced by the last-mentioned fac-

¹ Read at a meeting of the Northwestern Medical and Surgical Society of New York, February 15, 1899. For discussion, see page 476.

tor. The voice may be abolished, or the object may be so placed as not to interfere with the action of the vocal bands. It is surprising with how little objection the larynx will accommodate even a formidable foreign body. Several years ago I reported a case of tooth-plate in the larynx remarkable for its long retention and for the slight disturbance it caused. The plate fell into the larynx during a puerperal convulsion and was not discovered until a week later, when the patient complained merely of sore throat. A still more extraordinary case was reported a few years ago by Lennox Browne, in which a plate of artificial teeth was impacted in the larynx for twenty-two months without the condition being recognized. Dr. S. W. Langmaid of Boston once removed from the larynx a large pin, such as is used for securing packages of bank-notes, two years after it had been swallowed. Hoarseness was the only subjective symptom after the first disturbance.

One of the most remarkable cases on record as regards duration may be mentioned although beyond the scope of this paper. It is one recently reported by J. L. Bunch and R. Lake. The foreign body, a piece of mutton-bone, passed through the larynx into a bronchus where it rested eight years. It then became shifted to the trachea where it caused more or less dyspnea and certain laryngeal symptoms, and the case was exhibited as one of tracheal stenosis from syphilis. In the course of the succeeding year the bone was discovered and removed through a tracheotomy wound. Recent literature is not very rich in cases of this kind but a few may be referred to briefly. In three of six cases reported by Koch of Luxembourg the foreign body was a meat-bone, in but one instance the bone being arrested in the larynx. In a fourth case the point of a pin had penetrated the larynx from the pharynx. The diagnosis was made by digital exploration and not with the mirror. Two other cases were those of children who inhaled in each instance a bean. In one the foreign body was known to be in a bronchus, where it induced a fatal pleuropneumonia. In the other the bean seems to have passed beyond the larynx, since it was coughed up through a tracheotomy wound, and the child recovered. N. Palazzolo reports having removed with laryngeal forceps a leech which had been fastened in the ventricle of a larynx for ten days. He refers to the frequent occurrence of this accident in the island of Sicily, thirteen similar ones having been observed there. J. Walker Downie reports a case in which a pin was localized in the larynx by means of the Röntgen-ray, its position being accurately defined by a transverse as well as an anteroposterior photograph. An interesting feature of this case is that ten days

after the operation pricking and heat over the back of the head and neck were complained of, followed by vesication and sloughing of the skin and loss of hair over a large area.

Kronenberg also reports a case of foreign body discovered with the Röntgen-ray. It proved to be "the hook of a cravat" and was removed by tracheotomy. The symptoms had been attributed to false croup. Lanffs reports a case of eggshell embedded in the larynx and removed with forceps. Delsaux gives the history of case in which he removed a triangular splinter of bone from the subglottic space with forceps. The bone had been *in situ* for six months, one end being just under the anterior commissure and the other beneath the left arytenoid. A case reported by E. Fletcher Ingals in September, 1898, is in several respects a duplicate of one presented by myself at the meeting of the British Medical Association in Montreal in 1897. The foreign body, as in my case, was a metallic shoe-hook or fastener which had been in the larynx five weeks at the time of its removal by laryngotracheotomy. A fruitless attempt was made to examine the larynx with the aid of a vaginal retractor about four inches long. The hook could be felt behind the epiglottis but could not be seen with the laryngoscope on account of the profuse secretion and the intolerance of the patient.

My own case, of which I will give a brief abstract, is a noteworthy tribute to the value of expert use of the laryngoscope. The accident occurred about six weeks before the boy was brought to New York. After a violent fit of coughing and dyspnea there were no special symptoms and it was surmised that the shoe-hook had been swallowed. The voice was lost, however, and after a week spent in efforts to restore it by means of the electric current the laryngeal mirror discovered the foreign body impacted in the right ventricle of the larynx near the anterior commissure. An enlarged tonsil which interfered with manipulations was excised. Many attempts were made to remove the hook both with and without an anesthetic but the patient was so unmanageable that it soon became evident that an external operation would be required. At the time he came under my observation he was completely aphonic and respiration, especially during sleep, was rather stridulous. After several unsuccessful efforts at extraction through the mouth I performed a partial laryngofissure, after a tracheotomy, and met with no difficulty in removing the hook. Recovery was uneventful. At the end of a week, when the trachea tube was withdrawn, a pea-sized mass of granulation tissue was seen at the anterior commissure. No local treatment was permitted except a

sedative spray of menthol in albolene, and attempts to use the voice were positively forbidden. In the course of five or six weeks the patient was allowed to phonate and shortly he regained complete use of his voice.

Before opening the larynx in this case I made an attempt to see and extract the hook with Kirstein's misnamed "autoscope." Its purpose is to substitute direct inspection of the larynx for the ordinary laryngoscopic method. In some subjects a beautiful view of the glottis may be obtained. Others complain bitterly of the discomfort and actual pain produced by pressure of the spatula upon the base of the tongue. The original rather cumbersome apparatus has recently been modified by its promoter and it now consists practically of an elongated angular tongue-depressor. The end of the tongue-piece is slightly curved and is intended to embrace the median glosso-epiglottic ligament and drag forward the base of the tongue. Forced extension of the head so as to bring the long axis of the mouth in line with that of the trachea is essential. The position of the patient and the pressure of the instrument are, to say the least, uncomfortable, and it is not probable that this will supplant the older methods of examination. Max Thorner was more successful in dealing with a case by Kirstein's method. His patient was an adult with a very capacious and a very tolerant larynx who had a chicken-bone embedded in his right ventricle. It was removed with the utmost facility and without cocaine. In such a subject the old way of manipulating would certainly have been equally efficacious.

An impacted body which permits respiration may be dealt with somewhat deliberately. A moveable body, or one that may be readily dislodged, is more dangerous because it is liable to shift its position so as to completely cut off the air-current. A sharp-pointed or angular body may lacerate the wall of the passage and cause emphysema of the cellular tissue, or it may penetrate a blood-vessel and induce hemorrhage.

As to diagnosis, the history and the subjective symptoms usually furnish ample testimony, but in every case the laryngeal mirror should be used to determine the situation of the object unless the patient's condition is precarious. Under the latter circumstances a rapid tracheotomy may be demanded for the relief of urgent symptoms.

The extraction of a foreign body from the larynx often calls for the exercise of great ingenuity and dexterity. For example, a pin lying in the larynx with its point directed upward must be seized and pushed down before it can be withdrawn without lacerating the soft parts. Again a rough irregular body

must, if possible, be broken and removed piecemeal in order to avoid excessive damage to the tissues. In children the interior of the larynx may be reached with the finger, and our object may be accomplished under general anesthesia. In adults, all endolaryngeal manipulations have of late years been much facilitated by the introduction of cocaine. The choice of an instrument to be used must be determined by the character and location of the foreign body. Mackenzie's laryngeal forceps, Cusco's forceps, one of the various tube-forceps, or the cold-wire snare may be selected according to circumstances. Finally, if an external operation becomes necessary I would remind you of the advantage of a *partial* section of the thyroid cartilage with a view to replacement of the vocal bands and preservation of function. When section of the thyroid has been complete it is not easy to secure perfect apposition of the halves of the larynx. The undivided upper margin of the cartilage, however, prevents shifting and in young subjects especially, in whom the parts are pliable and may be readily retracted, it does not interfere with a sufficiently free exposure of the interior of the larynx.

CLINICAL MEMORANDUM.

AN EXTRAORDINARY CASE OF RETAINED CONSCIOUSNESS DURING COMPLETE SURGICAL ANESTHESIA.

By S. ORMOND GOLDAN, M.D.,
OF NEW YORK.

ON October 24, 1898, Dr. W. requested me to anesthetize a patient whose history was as follows: Age about thirty-four years; general condition good; respiratory and circulatory systems normal; pulse 120; urine analysis negative; had exophthalmic goiter; temperament sanguine; good intellectual development.

The narcosis was induced and maintained easily and with no untoward symptoms; operation consisted of the removal of a dead fetus (six months). The cervix being rigid and tightly closed it required deep anesthesia, which was evidenced by the absence of ciliary and conjunctival reflexes, complete muscular relaxation, slight stertor, and moderate dilatation of the pupils.

The duration of the narcosis was forty minutes, during which time the patient evinced no symptoms of sensation whatever. Her consciousness, however, was complete. She remembered everything which transpired during the operation, as for instance, the surgeon talking to the nurse; an instrument falling on the floor; a call up the speaking-tube and her husband answering; some one knocking at the door, etc. She subsequently said she endeavored by moving her finger to let me know she knew all that was occurring yet felt nothing. There were, however, no muscular movements of any kind. Respiration was deep, regular, and slightly stertorous.

It might be questioned whether the patient was completely anesthetized, but of this there is no doubt. In the first place chloroform was used. This is admittedly the anesthetic which can most easily produce complete narcosis. Secondly, it is well known that the anal reflex is one of the last to be abolished. This is also true of that of the cervix uteri, for if a patient is not completely anesthetized the instant the cervix is dilated the well-known extension of the leg upon the thigh occurs. This patient evinced absolutely no symptoms of sensation during the cervical dilatation or at any time during the narcosis.

The higher the state of intellectual development the longer auditory sensations and consciousness persist. This fact can often be made use of practically when anesthetizing a patient. It is not generally known that the effort of a patient to push the inhaler from the face and to struggle is partly voluntary. They are capable of understanding; if spoken to loudly and told to put down their hands, and assured they are safe they will do as told.

During anesthesia auditory sensations and consciousness keep pace with each other and often persist during the second degree of narcotism. Few patients, however, are subsequently able to remember having been spoken to and having acted in an intelligent manner. All the more extraordinary must it be when a patient retains consciousness and hearing during the third (surgical) degree of anesthesia, a consciousness of not imperfect remembrance of events, during the commencement of anesthesia but details of what transpired after the anesthesia was complete. This patient had been anesthetized previously with chloroform, during which time she remembered what occurred but she also had taken nitrous oxide gas and remembered nothing of what transpired while under the influence of that anesthetic. This is surprising, for if we would expect a patient to retain consciousness to any extent we would suppose this to occur with nitrous oxide and least of all with chloroform. The surgeon also told me the patient has an idiosyncrasy to morphin; she cannot take that drug because of the intense excitement engendered.

MEDICAL PROGRESS.

Increase of Cancer in Prussia.—HEIMANN (*Arch. f. klin. Chir.*, vol. 57, p. 961, vol. 58, p. 31) says that the number of cases of cancer in Prussia in the year 1877 was 2952, while in 1896 it had risen to 12,548. The latter figures are taken from recently published official statistics. In the order of frequency of their attack, the different organs involved were: uterus, stomach, breast, rectum esophagus, skin, liver, lips, lymph-glands. Between the twenty-fifth and thirtieth year there were no less than 336 cases of carcinoma. In these years the lesion was usually located in the stomach, or in the female genitalia, on the face, or the extremities, or in the rectum.

Vesical Calculi Formed around Sequestra of Bone.—HERESCO (*Centrabl. f. Chir.*, February 11, 1899) has collected reports

of fifteen cases in which, following inflammation of some one of the pelvic bones, an osseous fragment found its way into the bladder, there to be incrusted with lime salts and afterward to be removed. In addition to these rare calculi, he mentions also two formed about silk threads which found their way into the bladder after operations for the removal of the adnæxa and for the radical cure of hernia, respectively. In both of these instances a long period of suppuration preceded the deposit of the foreign body within the bladder.

THERAPEUTIC NOTES.

Formalin in the Treatment of Inoperable Cancer.—MITCHELL (*Brit. Med. Jour.*, February 11, 1899) employed a solution of formalin containing twenty per cent. of formalic aldehyde to stop the almost constant hemorrhage from a sarcoma of the cheek. The healthy skin was protected by painting it with a solution of caoutchouc. The solution of formalin was applied on a bit of absorbent cotton which was covered with gutta-percha tissue to prevent evaporation. The hemorrhage was stopped immediately and the tumor tissue was necrosed for a depth of about a quarter of an inch. The following day the necrosed portion was carefully cut away and the formalin was reapplied. This treatment was repeated daily until the tumor was entirely removed without the loss of a single drop of blood. Injections of the formalin solution with a hypodermic syringe produced an alarming swelling and gave no better result than the external application. There was no suppuration. This method of treatment is simple, produces no shock, and is absolutely bloodless. This formalin has a much more penetrative power than the usual escharotics. As the necrosed tissue is shaved away, an admirable view is presented of the extent of the new growth, and if desired, the excised portions can be examined microscopically, as they are already hardened.

Causes and Treatment of Pernicious Anemia.—GRAWITZ (*Rev. de Therap.*, February 15, 1899) says that one of the chief difficulties in the way of the successful treatment of pernicious anemia is the improper nourishment of the patient on account of his anorexia. It is necessary to wash out the stomach and bowel and to give saline laxatives to correct this. If the urine contains an increased amount of indican it is a sign that the intestines contain putrefactive material and internal antiseptics, such as calomel and salol, should be given. To correct the hyperacidity of the stomach bitters should be prescribed, or the wine of condurango, wine of pepsin, or porter. It is indispensable that the physician have an oversight of the fluids taken by the patient. Iron is useless. Arsenic is the only drug which has a direct beneficial action. Massage, exercise, and appropriate gymnastics may be of some benefit. Infusion is only indicated in women who have lost a great deal of blood in induced labor.

Treatment and Prophylaxis in Malaria.—THAYER (*Progressive Medicine*, March, vol. i, 1899) quotes Ziemann as highly recommending the intramuscular injection of quinin in malaria. The bimuriate of quinin o.5 (grs. vii) to 2 grams (m. xxx) of water is the usual dose and is inserted into the glutei. In the proportion of 1 part of quinin to 4 of the fluid the injection is painless, and this method of giving quinin is recommended for its prompt action. During the past year euchinin, the ethyl carbonate of quinin, a new and tasteless product, has received attention. In some cases in which quinin has not stopped the fever euchinin was efficacious in accomplishing this result. The author holds that the favorable reports on the use of this drug in many quarters should justify its more general use. Certainly if intelligent use of the drug proves it to be as efficacious as quinin, the product which is free from unpleasant taste will possess a great advantage in treatment.

In regard to the use of quinin as a prophylactic the author quotes Koch's statement that quinin, o.5 (gr. vii), taken every other day, was sufficient to ward off attacks of fever.

Treatment of Scarlet Fever and Scarlatinal Nephritis.—BLACKADER (*Progressive Medicine*, March, 1899, vol. i) is opposed to the indiscriminate use of diphtheria anti-toxin in the treatment of the anginas of scarlet fever. This should be limited to those cases in which the Klebs-Löffler bacillus can be looked upon as the cause. Much, however, can be accomplished by careful disinfection of the pharynx and nasal passages [with suitable solutions. Traube's method of injecting a three-per-cent. solution of carbolic acid into the tissues of the tonsils and soft palate should be practised as soon as enlargement and tenderness of the lymphatic glands of the neck give evidence of septic infection, and should be kept up until the temperature reaches normal. A daily injection of 1 cm. of the three-per-cent. solution is distributed by a number of punctures over the area involved. The pain produced is of short duration, and a marked improvement in the dysphagia is at once experienced, due to the anesthetic effect of the carbolic acid. It is claimed, also, that the fever is favorably influenced. Nephritis is not a contraindication for the employment of this treatment. It is stated that some cases have been benefited and the albuminuria has diminished under the treatment. The urine may show the color of carbolic-acid poisoning, but this rapidly disappears on discontinuing the injections.

In the treatment of scarlatinal nephritis the author endorses Detlefsen's plan which includes: Rest in bed, quick relief to the engorged kidneys by means of mild diaphoretics and purgatives; proper diet, and non-irritating diuretics. The use of baths is warmly recommended, and preference is given to a warm bath of 98° to 100° F. for fifteen to twenty minutes, once to three times daily. Cold compresses should be applied to the head while the patient is in the bath with subsequent warmth to the skin and rubbing. If these measures fail to produce a copious perspiration, hot drinks, or to a child of five years $\frac{1}{2}$ of a grain of pilocarpin or an infusion of 10 grains of

jaborandi leaves may be given. When a bath cannot be used the child may be wrapped in sheets wrung out in hot water and packed in hot bottles. Between the baths flaxseed poultices are to be applied over the kidneys. On account of its richness in proteids an absolute milk-diet is not advised. Diluted milk is given and the diet supplemented by gruel, light fruits, and young vegetables. If the urine is deficient in amount diuretics are indicated. Vichy may be given and a lemonade made by dissolving a dram of bitartrate of potassium in a pint of boiling water and adding the juice of one lemon. Acetate of potassium from 3 o 5 grains every three hours is a safe and efficient diuretic. For uremia a free evacuation of the bowels is procured by jalop or senna, or by an enema of equal parts of water and vinegar. An ice-cap should be applied to the head. To maintain the heart's action, hypodermic injections of caffeine or of tincture of digitalis or strophanthus should be given, especially in those cases where edema of the lungs is detected.

Effect of Quinin on Asthmatic Attacks.—VAN SWERINGEN (*Ind. Med. Jour.*, March, 1899) tried many remedies for an attack of bronchial asthma lasting two weeks, but at no time succeeded in getting more than two-hours' freedom from distress. Amyl nitrite gave the patient fifteen-minutes' ease; chloroform but little longer, after the inhalations stopped. Belladonna seemed to have lost its effect for good entirely. Morphin did better than anything else, and gave her longest relief, but was followed by so much nausea and vomiting that she refused to have it again. Iodids had been given regularly from the first. Then for the purpose of stimulating the inhibitory reflex center quinin and strychnine were tried. The effect was almost magical. The dose of the quinin was 7 grains, the extract of nux vomica was given in $\frac{1}{4}$ -grain doses, and to this was added $\frac{1}{4}$ grain of the sulphate of codein. They were taken *pro re nata*. In the intervals the iodids were continued, and the patient had less asthma in the last year than in ten years previous.

Hemalbamin in Chlorosis and Anemia.—DR. GOLINER (*Deut. Med. Zeit.*) recommends hemalbamin for the relief of chlorosis, anemia, and gastric and intestinal catarrhs. An effective iron preparation, provided it contains nutrient material in a predigested condition, especially albuminates, whose absorption and assimilation requires no tax upon the digestive system, is the treatment *par excellence*. Such a preparation of iron is found in hemalbamin. It is a powder, readily soluble in hot water or alcohol, and contains all the salts and albumins present in the blood, *i.e.*, hemoglobin with hematin, serum albumin, and paraglobulin, in the form of albuminates. Therefore hemalbamin closely resembles fresh blood in its composition, the fibrin alone being absent. The iron effects of the hematin, together with the nutritive influence of the albuminates present in this preparation, when administered in appropriate cases, are promptly manifested. The dose of hemalbamin is 15 grains three times a day.

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SATURDAY, APRIL 15, 1899.

PSYCHIC PHENOMENA DURING ANESTHESIA.

MANY a patient on coming out from the influence of an anesthetic has certain peculiar experiences to relate. It has been the custom in the past to dismiss these phenomena lightly as mere phantasmagoria of intoxication unworthy of serious attention. As psychology has come more and more into prominence during recent years, however, the impression has gained ground that these seemingly unimportant phenomena of ether or chloroform intoxication may be of service in enabling the psychologist to get at the basis of what constitutes the conscious personality. It was the pathologic rather than the physiologic that first added markedly to our knowledge of the anatomy and special functions of the nervous system, and of the functional significance of its various parts, thus enabling the neurologist to raise the science out of the sphere of mere theory. It will not be too much to hope that pathologic psychology will be of corresponding service to the allied branch physiologic psychology which is at present attracting so much attention.

Among our clinical memoranda Dr. S. Ormond Goldan reports this week a case in which complete

anesthesia, as far as pain is concerned, was accompanied by perfect consciousness, with knowledge and remembrance of the surroundings, and of the surgical manipulations that were performed. Such phenomena are of great importance in solving that mysterious problem in neurologic psychology, the existence of a dual personality, especially when accompanied by a distinct consciousness for each personality, or at least a subliminal consciousness not subject to ordinary psychic laws.

These cases of persistent consciousness in the higher or mental sphere during complete anesthesia to pain are not so rare as might be thought from the infrequency with which they are reported. Most anesthetists of wide experience have had such cases. The phenomena are neglected because considered of no scientific value. The psychologic departments of several of our great universities, notably Columbia University here in New York, are interesting themselves in these subconscious phenomena of anesthesia, and medical men should not neglect the opportunity their frequent contact with anesthetized patients affords them to secure material for the interesting cognate science of physiologic psychology.

TREATMENT OF INOPERABLE CANCER.

An article by Mitchell published in the *British Medical Journal* and abstracted in this number of the MEDICAL NEWS calls attention anew to the undying hope in the breast of the surgeon that he may at last find some therapeutic resource which shall destroy a malignant growth, while leaving uninjured the healthy tissues surrounding it. This surgeon used a strong solution of formalin with apparent success upon a sarcoma of the face which had grown far past any attempt at its removal by the knife. The application of formalin was made, not with a view to the cure of the disease, but simply to stop the hemorrhage which was slowly sapping the patient's strength. When the patient returned for a change of dressing the following day, Mitchell was pleased to find that the bleeding points had been thoroughly hardened, and that the characteristic necrosis caused by formalin had extended a quarter-inch into the tissues of the growth. Accepting the suggestion there offered to him, he sliced away most of the tissues so changed, and repeated the application. From day to day he was able to cut the

tumor off bit by bit, without the loss of a drop of blood, until the whole growth had been removed.

It is scarce worth the while to herald this as a discovered cure for inoperable cancer. Too often already have the hopes of the medical fraternity been raised by the reported cures of malignant growths by the latest product of chemistry of the coal-tar products, or by some better known chemical substance, or by some physiological toxin. Chelidoin and erysipelas toxins and protonuclein and carbid of calcium, like the older remedies alcohol and arsenic, have not proved themselves to be the long hoped for cure.

The parasitic theory of the origin of malignant disease is not accepted by the most competent pathologists, and for the present, at least, we must continue to look upon a cancer as "bone of our bone and flesh of our flesh," and while this view prevails, it must be admitted that the hope for a substance which will separate the malignant growth from the rest of the body without injury to what remains, is based on a very slight foundation.

THE THERAPEUSIS OF SUGGESTION IN CHILDREN.

THE modern physician has come to realize very clearly how potent an influence for good suggestion is in the treatment of patients. No matter how material the ailment, no matter how dependent upon gross morbid lesions, mental influence has a wonderful effect upon the course of disease, or at least upon the prominence of symptoms. Whether consciously or unconsciously we are constantly using suggestion in practice. Non-medical minds have come to realize this very fully, and have crystallized their convictions in the matter in such expressions as "there is no use having a doctor unless you have confidence in him," or "the medicine will not do you any good unless you believe in it." The expressions are not without exaggeration, but they have underlying them a certain basis of truth.

Our little patients, the children, have not come to realize yet all the magic influence for health there is in the visit of the doctor. They do not brighten up to tell of their symptoms during the last twenty-four hours, nor wait for the doctor's examination to assure them that the disease is pro-

gressing favorably, and so be encouraged to take up courageously once more the battle for health. In many instances children associate the visit of the doctor with unpleasant disturbance of their peace, with discomforting examinations, perhaps with painful investigation of their illness and its causes. They do not welcome his coming; on the contrary, are only too glad to see him go, careless whether he should ever come again, hopeful that he will not.

This is, of course, an unfortunate state of affairs, and one that cannot be entirely ameliorated in every case. Much can be done, however, to remove some of the objectionable features of the doctor's visit. It is more or less necessarily attended with discomfort and inconvenience for the little sufferer, yet it may be so conducted as not to make the child utterly misconceive its purpose. The stories of even wild animals submitting to additional pain when already suffering a good deal, because somehow they had gained the impression that what was being done was for their good, are not entirely without foundation. Certain individuals possess what, for want of a better word, may be called a magnetic influence in such matters that makes their beneficent purpose clear even to the animal.

Very young children also can be made to understand, if properly approached, that the doctor's bothersome visit is for their good. Certain it is that even when scarcely more than a year old they can learn to resent the doctor's meddling, and recognize his presence or even his title by fretfulness. To win a child's confidence requires above all simple straightforwardness. If an examination is to cause pain the child should not be tempted to submit to it by the assurance that "it will not hurt," for the delusion serves but once and inevitably leads to loss of confidence. Frank explanation that it will hurt but not much, and then sincere efforts to keep this pledge are much better, though for the moment the child may be rendered unfriendly by the pain. If the confidence is gained and retained then the influence of suggestion may be used quite as powerfully as in the case of older people. The child's attention may be directed to its prospective cure, and to the expected good influence of the medicine and other remedial measures. Remedies that are not easy to take and other therapeutic measures that are a source of considerable discom-

fort will be more readily yielded to if the cooperation of the little patient is thus secured.

It takes time, we know, to establish such relations between the strange doctor and his timorous little patient. It cannot be done in the moment or two that is sometimes given for casual examination by the hurrying medical man. The influence for good is in most cases, however, so potent that it seems worth the while. The ability to establish such confidential relations with children is the best earnest of success in the specialty of children's diseases.

As for the direct influence of suggestion in many children's ailments it is not appreciated to a degree corresponding to its true worth. We know of a mother who has by direct suggestion influenced asthmatic attacks in a young child so as to greatly decrease their number and severity. We know of another who has been able several times with a boy of four to influence the course of attacks of laryngospasm, and to practically prevent the feeling of exhaustion that follows them by carefully directed suggestion as to regular breathing. Once the boy's attention was called to the fact that he could breathe easier if he did it quietly, and then the suggestion that he was nervous, not sick, an absolute truth in the matter, made the after-effects much less marked. This whole subject of suggestion as a therapeutic agent in children's diseases is too large to handle fully in the limited space of an editorial, but we think we have said enough to show how important and hopeful a feature of pediatric therapeutics it should be.

PET ANIMALS AS CAUSES OF DISEASE.

As the result of the announcement that an Englishman had found that more than ten per cent. of the canaries and other song-birds that die in captivity succumb to tuberculosis, there has been considerable attention given in the daily newspapers to the possibility of human infection from that source. Parrots have come in for a share of condemnation in this connection, and gradually the danger of infection from other pet animals has been drawn into the discussion. A correspondent of the *New York Times* states, what is well known of course, that by far the larger number of monkeys that die in captivity are carried off by tuberculosis, and that the visiting of

children to monkey-houses, and especially the keeping of monkeys as house pets (a custom that seems to be spreading) must be sources of serious danger.

We are not of those who like to set up scares of contagion at every possible opportunity, but the fact should be ever kept in mind that the presence of pet animals in a home is always associated with a certain amount of danger. Papers presented last summer at the French Congress for Tuberculosis in Paris demonstrate to our minds, what has been hitherto very doubtful, that aviary and human tuberculosis are essentially the same pathologic process, due to the same germ, modified by cultural environment, but convertible under favorable circumstances one into the other.

We recall what Nocard, the greatest living authority on tuberculosis in animals, and the man to whom we owe the best culture methods for the tubercle bacillus, found in a series of autopsies on dogs. These animals had previously been considered as very refractory to tuberculosis, so much so that for a time their blood serum was used as a curative remedy for the disease in human beings. The great student of comparative tuberculosis demonstrated in some 200 successive autopsies on unselected dogs that died at the great veterinary school at Alfort, near Paris, that in more than one-half of the animals there were tubercular lesions, and in many of these the lesions were of such a character as to make them facile and plenteous disseminators of infective tuberculous material.

The recent discussion on rabies at the New York Academy of Medicine, an account of which appeared in a recent issue of the MEDICAL NEWS, shows that whatever may be said as to its rarity that dread disease actually exists in this country. Cases of rabies from various parts of the country that have recently been reported in our columns show that there must be scattered foci of the disease in widely separated districts. As the disease is liable to affect any animal this constitutes not a serious or widespread, but an ever-to-be-remembered danger which is, moreover, practically dependent on pet animals.

Parrots are known to be peculiarly susceptible to a disease so peculiar to themselves that it is called from the Greek word for parrot, *psittacos*, psittacosis. A number of fatal cases in human beings of

what was at first supposed to be a malignant influenzaal pneumonia were in Paris traced to the bacillus at present thought to be causative of the parrot disease. A certain proportion of parrots are known to die from tuberculosis. Cats are known to sometimes have tuberculosis, and that they have in many cases been carriers of diphtheria and other of the ordinary infections directly and indirectly is more than suspected.

These would seem to be the facts in the matter. They are, perhaps, not enough to justify a crusade, on sanitary grounds, against the keeping of pet animals. Pet animals are, however, the fad of the day. They are multiplying more and more, and it does not seem unreasonable nor is it dictated by any desire to produce a sensation that we should demand of their owners great care in the matter of detecting the first signs of disease in them, and then so guarding them as to prevent their being a source of contagion to the human. Especially does this warning seem necessary with regard to children. With them the animals play more freely, and readier opportunities for infection are given. Moreover, growing children are less resistive to disease, and they present excellent cultural opportunities for micro-organismal growth when once implantation has taken place. The older and better-informed people may take foolish risks if they will; there should be no such option in the case of children.

ECHOES AND NEWS.

Sugar from Albumen.—M. Ferdinand Blumenthal has described to the Académie des Sciences de Paris a process of making sugar from albumen which may throw some light on the pathology of diabetes.

A Popular Impression Verified by Science.—A German statistician has discovered that ballet-dancers as a rule attain an age much above the average. The names of a number of celebrated dancers are given whose ages range from fifty to eighty years. Some of these artists are still fulfilling engagements.

Quarantine to Guard against Rabies.—The British Government is making strenuous efforts to stamp out rabies in the British Islands. The State Department at Washington has been informed through the British Ambassador that every dog imported into Great Britain is required to have a license from the Board of Agriculture.

Disinfection at Havana of Ships Clearing for United States Ports.—Dr. Brunner, the chief quarantine officer of the Marine Hospital Service at Havana, has begun the thor-

ough disinfection of out-going ships bound to southern ports of the United States. The health authorities of Louisiana and Alabama have decided to admit such vessels but for the present those of Florida and Georgia will insist upon quarantine.

Appropriation for Professor Koch's South-African Expedition.

—The German Imperial Parliament has made a grant of 60,000 marks, about \$15,000, to defray the expenses of Professor Koch's scientific investigations of malaria in South Africa. The Government considers very sensibly that anything that will lead to a better knowledge of the disease will redound so much to the benefit of the German colonies and colonists that the expenses involved are regarded as a good investment.

Must Surgeons Wear Masks While Operating?—Gloves for surgical work, in certain lines at least, have come to stay. Now comes the question of making the patient's breath innocuous and preventing particles from the surgeon's face or hair from falling on the field of operation. Dr. Berger of Paris recommends a gauze mask for this purpose. He and his assistants have worn them in sixty-eight cases of radical operation for hernia with union by first intention in every case and no rise of temperature.

Another Medical Martyr to the Plague.—Major Evans, formerly of the British military service in India, and latterly Professor of Pathology in the Calcutta Medical College, died March 13th from plague. He contracted the disease while engaged in making the post-mortem examination of a subject who had died from the disease. This makes at least the fourth victim within the last few years among medical men that the plague has claimed as its own while they were engaged in studying the nature of it.

The Cancer Bacillus.—A cablegram from Paris to the New York *Herald* announces the confirmation of Dr. Bra's statement that he has succeeded in isolating the parasite which is invariably present in cancerous growths. It is a fungoid of the ascomycetes family, and is believed to be the active agent in the production of cancer. Inoculation of animals with a culture produced cancerous tumors, from which the parasite could be again isolated. Experiments are being made looking to immunization and curative treatment.

Sick and Wounded Soldiers Returning from the Philippines.

—General Otis has notified the War Department at Washington that he has sufficient transports at hand and will send home at once the sick and wounded of his army. Several of these vessels will leave shortly for San Francisco with the sick, wounded, and convalescent. The transports will be met at San Francisco by paymasters who will pay off the men and send them to their homes at the Government's expense. Those who are unfit for travel will be sent to the Government hospital until they have sufficiently recovered to pursue their journey.

Comparative Mortality of Married and Single.—Dr. Livier, a French statistician has recently published some very interesting mortality statistics. He announces that

half of all who are born die before 17, that only 1 person in 10,000 lives to be 100 years old and, still more striking, that only 1 person out of every 1000 lives to be 60. The married live longer than the single, but for every 1000 births there are only 95 weddings and as some people indulge themselves in a second and even third matrimonial experience it is evident that only a comparatively small proportion of mankind are willing to make all the sacrifices necessary to secure long life.

Keen's "Surgical Complications of Typhoid" in England.—We had occasion recently to express our high appreciation of Dr. Keen's monograph on this subject, almost at the same time (in the number for March 25th) the *British Medical Journal* comments most favorably in its editorial columns upon the same subject: "The work," the editor says, "deserves the attentive perusal of all practitioners. It is, perhaps, the most important contribution to the literature of the 'borderland' between medicine and surgery that has yet appeared from any American author." This is indeed high praise for an American work, coming from our thoroughly conservative British contemporary.

Yellow Tinge of the Palms and Soles as a Symptom of Typhoid.—A certain yellowish-tinge of the palms and soles is said by the *Medical Press and Circular* to occur at the beginning of typhoid fever and persist until convalescence is well under way. The yellowness is attributed to feeble circulation by which the subcutaneous fat becomes sufficiently apparent through the skin to tinge the cutaneous color. It is said to be more marked in proportion as the integument is thickened by toil, but is visible even when the skin is quite thin. The appearance is called the palmar sign of typhoid. We do not think that any special attention has been given to the sign in this country.

The Fothergill Medal to Dr. Copeman.—The Council of the Medical Society of London has just announced, on the recommendation of a special committee, the award of the Fothergillian Medal for 1899 to Dr. S. Monckton Copeman of London "in recognition of his researches on the preservative effects of glycerin upon vaccine lymph and of the practical benefits that have arisen therefrom." Dr. Copeman delivered the 1898 Milroy Lectures on Vaccination before the Royal College of Physicians of London. They have since appeared in book form and have attracted much attention. They were founded mainly on original investigation into the bacteriology of vaccine material.

"Glimpses of Influenza in the Past."—In the *British Medical Journal* for March 11th there is a very interesting paper with the above title. Among the various epidemics of influenza described are: The "Mure" which prevailed in Italy, Germany, and Great Britain in 1173; the "Coccoluche," a pandemic wave which swept over Europe in 1510; the "New Acquaintance" which was found in Edinburgh in 1562; "Catarrhal Feaver" which Willis described in 1658; the "Epidemic Cough" described by Sydenham in 1675, and a "Most Completely

Epidemic" disease described by Huxham in 1733. From 1693 up to the present time, not counting the series which began in 1889-90, seventeen severe epidemics of influenza have occurred.

A Missing Drainage-tube.—The *Medical Press and Circular* of London gives the result of a recent English trial for malpractice because of the loss of a drainage-tube in an abscess-cavity. Dr. Findlater of Edgware opened an abscess some three years ago and inserted a short drainage-tube. At the next day's dressing it had disappeared and despite careful probing no trace of it could be found. The wound healed but the arm remained more or less useless. A few months ago a fresh abscess formed, which on being opened gave exit to the missing drainage-tube. The patient sued Dr. Findlater for damages on the score of negligence in his professional duties. The verdict was for the Doctor, the telling point in the defense being the fact that the plaintiff herself thought that the missing drainage-tube had been lost in the room and was not in the abscess-cavity.

Drs. Watase and Takamine Honored.—On March 28th the Imperial University of Japan at Tokio conferred the high honor of the doctorate, corresponding to LL.D. of the Occidental Universities, on two of its graduates, Drs. Sho Watase and Jokichi Takamine. The former is Assistant-Professor of Cellular Biology in the Chicago University, and Dr. Takamine has made brilliant researches in some branches of cryptogamous botany which have already yielded valuable economical results in this country as well as in Europe. It will be seen that both these men have won their way in a foreign country, and Dr. Takamine is attached by the most pleasant domestic ties to this country. One of the most important discoveries in his chosen field of research bears his name in a modified form, for to his diastase he has attached half of his name in the syllable "Taka," which means "strong" in Greek, and "high" in Japanese.

Privileges of Doctors on Bicycles.—At Gosport, England, not long ago, the magistrates dismissed a police summons against a doctor who had been brought before them charged with violating the ordinance of the town which forbids riding a bicycle on the foot-paths or sidewalks. The grounds for the dismissal were that a medical man when called to an urgent case has a right to take the shortest, most expeditious way. In certain of the towns of Southern Germany, a doctor mounted on a bicycle has the right of way over other vehicles, the same as an ambulance, by ringing his bell and displaying a colored signal that indicates that he is on a hurry call. Under the same circumstances, too, he may use certain busy streets that are ordinarily closed to bicycles. Are the bicyclists in the profession of America slow to claim the privileges that ought to be theirs, or have we perhaps not the same need here for such privileges?

The O'Dwyer Memorial.—A committee of over forty physicians, representing sixteen different medical societies of the City of New York, and including representatives of both schools of medicine, has been formed for the

purpose of doing honor to the memory of Dr. Joseph O'Dwyer. The memorial will probably take an educational form. By the plan now outlined it is proposed to raise a fund of \$30,000, the interest of which shall support two O'Dwyer Fellowships in Pediatrics, open to competition by physicians who graduate in the United States, and to be held by the successful competitors for a period of two years. During this period they must furnish satisfactory proof of their engagement in original research work to a committee of five, one of whom shall be appointed by each of the following: the President of Harvard University, the Dean of the Johns Hopkins Medical School, the Provost of the University of Pennsylvania, the President of the University of Chicago, and the President of the New York Academy of Medicine.

Health and Sanitation at Manila.—Some time ago an ex-officer of the British army wrote to the Secretary of State, John Hay, in regard to the health of the American troops in the Philippines and expressed the fear that the troubles which had overtaken the British in India would likely befall the Americans. The letter was sent to General Otis who returned it with the following endorsement: "The troops here soon become acquainted with and accustomed to the climate. At present, as affairs are somewhat critical, military duty is exacting, but I think, however, that the health of the command will compare favorably with that of the British army in India, there being only eight or nine per cent. on sick report for all causes. The condition of this command is constantly misrepresented in the United States." Considering that the American troops in the Philippines are fighting in a tropical climate where the temperature is constantly so high that the breech-clout is the sole covering of a large proportion of the population, the percentage reported by General Otis should be a matter for felicitation rather than for misrepresentation.—*Army and Navy Journal*.

CORRESPONDENCE.

THE NEW YORK BOARD OF HEALTH AND THE SALE OF ANTITOXIN.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—In your editorial on the "New York Health Department and the Sale of Serum," published under date of April 8, 1899, you say, "The economic question, however, of a subsidized institution entering into competition with private enterprise, still remains. Except under extraordinary circumstances, it is pretty well agreed that this is wrong."

I cannot refrain from saying that extraordinary circumstances which were assumed to exist when the original law creating the Antitoxin Fund was passed in 1895, were imaginary rather than real. The Antitoxin-Fund law however, became a part of the charter in 1897, and the introduction and advocacy of the Collier Bill was an effort to take the municipality of Greater New York out of trade, in order that the Health Board might be free from all disturbing influences and able to devote its entire attention to the purposes for which it was created.

It is also a matter of interest in this connection that it should be assumed to be necessary, for the maintenance of experimentation in other antitoxins, to continue the sale of the surplus antitoxin in order to furnish funds for such investigation. It is a poor principle in political science that a business should be carried on at a loss to obtain, indirectly, an appropriation for an object for which money could be readily obtained directly.

We are most heartily in accord with you when you suggest the propriety of the Board of Health now accepting the economic principle with which this letter opens, and by official action discontinuing the sale of serum. We believe that all fair-minded physicians will agree with you in this position, and this is exactly what the Collier Bill was intended to do. REYNOLD W. WILCOX, M.D.

NEW YORK, April 11, 1899.

CANCER STATISTICS.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—In Dr. Park's paper on "Cancer," published in your issue of April 1st, he says, "In England and Wales . . . where most careful statistics are kept, the cancer death-rate has risen from 1 in 5646 of the population in 1840 to 1 in every 1306 of population in 1896, that is, in 50 years the proportion has increased nearly five times."

I have not been able to obtain the figures for the years prior to 1864, but the increase in the cancer death-rate since that date, although indicating a steady growth of the disease, does not show anything as extraordinary as Dr. Park's figures. The following statistics, the earliest and the latest at hand, are taken from the reports of the Registrar-General. When this office was created I do not remember; but I hardly think that the statistical methods in vogue prior to 1850 are likely to have been remarkable for their reliability.

Ratio of deaths from cancer to each million of persons living (in England and Wales) in the following years:

1864	385	1884	563
1865	372	1885	572
1866	385	1886	590
1874	401	1894	713
1875	471	1895	755
1876	471		

Startling as these figures are the ratio for 1895 is only double that of 1865. Moreover, taking the total number of deaths and making no allowance for increase of population, the statistics do not demonstrate a three-fold increase in thirty years, although they approach it.

Total number of deaths from cancer in England and Wales: 1865, 7922; 1875, 11,414; 1885, 15,260; 1895, 22,945.

If Dr. Park can vouch for the accuracy of his figures for the year 1840—no doubt fifty years ago the term "cancer" included sarcoma and other tumors—the increase of the death-rate in the twenty-four years from 1840 to 1864 must have been appalling, even as compared with the increase between the latter year and 1895. I confess, however, that I am unable to convince myself that the cancer mortality-rate can have been multiplied five-fold in fifty-six years (1840-1896) when the Regis-

trar-General's reports show that the ratio has only been doubled—an alarming growth—in the past thirty-one years (1864-1895). Should my incredulity upon further investigation prove unfounded I shall hasten to make confession.

A word upon another subject. Any comparison between the cancer death-rate and the phthisis death-rate in New York State is fallacious, because so many sufferers from the latter disease leave the State in the hope of deriving benefit from a change of climate, never to return. As a result the figures usually quoted of the number of deaths from "consumption"—meaning tuberculosis pulmonalis, I suppose—are below what they should be, just as those of the States to which phthisical patients are sent in search of health are higher than the correct facts warrant.

I am not a physician and I know absolutely nothing of pathology. I have ventured to write this letter in consequence of having had some little experience in dealing with statistics.

Yours etc.,

LAWRENCE IRWELL (M.A., B.C.L.).

BUFFALO, N. Y., April 10, 1899.

VERATRUM VIRIDE IN THE TREATMENT OF PNEUMONIA.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—Among physicians, with few exceptions, blood-letting in pneumonia has been relegated to the past. Yet we are often confronted with the question as to whether it would not have relieved arterial tension and thereby alleviated the engorgement of the lung tissue, and at least modified the course of the disease. In veratrum viride we have the lance, now discarded by many, that will slow the circulation, relieve arterial tension, stay the engorgement, and modify the disease, by bleeding the patient in his own veins, thus conserving his strength for the struggle he has entered upon. I was taught more than twenty years ago to rely upon a good quality of veratrum viride (Norwood's tincture), to give it intelligently, and to watch its effects. The indications for its use are the early stages of engorged lung tissue or a harsh bounding pulse of 108 to 120. It has ever been a faithful, reliable friend, as positive in its effects as almost any drug we possess.

It has been claimed that veratrum is too depressing. I would ask which is ultimately the more depressing, a heart with the brakes off, clipping away at a rate of 120 to the minute, or a heart held down to 70 or 80 with veratrum viride? In sthenic subjects, with a tense, bounding pulse of 120, three to five drops of Norwood's tincture of veratrum viride, guarded by $\frac{1}{10}$ of a grain of strychnin every two or three hours will many times bring the pulse to 70 or 80, with a soft natural feeling, the patient expressing relief from pain and oppression in breathing. If the temperature is not correspondingly reduced, which I think is seldom the case, small doses of phenacetin, 5 grains, guarded with 2 grains of caffein, may be given between doses of veratrum and strychnin. If nau-

sea occurs the veratrum viride should be withdrawn and good whisky given, which will relieve the sick stomach.

Veratrum viride, in my opinion, is much safer than the coal-tar preparations. If the patient gets an overdose of veratrum he is nauseated and vomits it. Later, after the active inflammatory stage has subsided, the veratrum should be stopped and stimulants, such as strychnin, the ammonias, and whisky relied on,—strychnin in large doses if there be stupor, shallow respirations, and cyanosis. The poisonous action of veratrum viride upon the system may be alarming, yet I have never seen any deaths reported from its use and it is not accumulative.

Z. T. MAGILL, M.D.

WINTERS, CAL., April 1, 1899.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

PUBLIC HEALTH OFFICERS IN COUNTIES AND TOWNSHIPS OF THE STATE—ANNUAL MEETING OF THE STATE MEDICAL EXAMINING BOARD—A HOMEOPATHIC HOSPITAL FOR THE INSANE—REPORT OF THE NORRISTOWN HOSPITAL FOR THE INSANE—AN OFFICIAL'S VIEWS ON TYPHOID FEVER—SOME STATE APPROPRIATIONS—REPORT OF THE EPILEPTIC COLONY AT OAKBURN—PERSONAL NOTES—HEALTH STATISTICS.

PHILADELPHIA, April 11, 1899.

An act to provide for the appointment of medical officers of public health in the counties and townships of this State failed to pass the House of Representatives last week because of lack of a constitutional majority. Under the prevailing law all complaints within municipal limits can be enforced but, as Dr. Lee points out, "Objectionable establishments being warned by the local board of health that certain improvements must be introduced in order to abate the nuisance which they are causing, simply remove just outside municipal limits where they continue to be a menace to the public health. In the second place although every possible precaution be taken to prevent the spread of contagious diseases within the municipal limits, ordinances cannot be enforced beyond a certain line, and in many cases that line may be the middle of a street built up on both sides. It is evident, therefore, that while infection can be prevented from spreading on one side of the street there is no control over the residents upon the other side. It is necessary, therefore, that steps be taken to protect cities and boroughs from nuisances and epidemics in their suburbs which are yet outside their jurisdiction."

In the last annual report of the State Board of Health Dr. Lee states that appeals are constantly addressed to him asking why those living in rural districts and villages are not equally entitled to protection for their lives and health as are those living in large cities. There is a mistaken impression abroad that the country districts are naturally so healthy as to need no laws for the prevention of disease. There could be no greater mistake. Typhoid fever has long been known to be a disease of the country village and farm, and all of the contagious diseases peculiar to childhood, such as scarlet fever, diphtheria, and

measles, run riot in the children who attend public schools.

The next annual meeting of the State Medical Examining Board will be held June 20th to 23d for the purpose of examining applicants for a license to practise medicine in Pennsylvania. The State Medical Society will hold its examinations in Philadelphia and Pittsburg, the Homeopathic Board in Philadelphia, and the Eclectic Board will meet in Harrisburg.

The Homeopaths of Pennsylvania have good reason to rejoice for their tireless efforts to secure a State institution seem about to bear fruit. The bill appropriating \$150,000 for the purchase of grounds and the erection of a building to be used as a hospital for the homeopathic treatment of the insane of this State was reported favorably from committee last week, and in all probability will now become a law. At the same time comes the monthly report of the Norristown State Insane Asylum which shows, according to the Resident Physician, Dr. D. D. Richardson, that the hospital is so overcrowded as to compel 314 patients to sleep on the floor in the corridors. The trustees year after year vainly ask for more money for additional accommodations, but with the election of Dr. Joseph Thomas, who was chosen last week to fill the position of President of the Board, new energy will be infused, and success may at last crown their efforts.

It is not very often that a public official delivers opinions on medical subjects but Mayor Ashbridge, in his inaugural address, gave utterance to a few remarks upon the present epidemic of typhoid which are worth repeating: "While I am far from believing that there exists a typhoid epidemic, I cannot deny that there is more than there should be if the drinking-water is responsible. Statistics show that while the proportion of deaths elsewhere is as 1 to 5, yet in Philadelphia the rate is 1 to 11. I can scarcely believe that the practitioners in every other large city are so lacking in the knowledge of this disease as the figures seem to show. I am inclined to believe, on the contrary, that half the cases of so-called typhoid fever reported in this city are not typhoid at all but enteric or intermittent fevers." It is with such arguments and ignorance that the people at large are beguiled while the water-question remains the same in spite of all the indignation meetings, committees on pure water and newspaper complaints.

Among the items in the General Appropriation bill of the Legislature for 1899 are the following: Medical Council \$3000; Dental Council, \$1500; Hamet Hospital Association, Erie, \$10,000; State Hospital of the Middle Coal Field, \$40,000; Pennsylvania Institution for the Blind, \$88,000; St. Vincent's Hospital, Erie, \$16,000; Pennsylvania Training School for Feeble-minded Children at Elwyn, \$210,000.

The annual report of the Pennsylvania Epileptic Hospital and Colony Farm at Oakburn gives a summary of the work accomplished during the past year, the third since its inauguration. During this year 31 patients were admitted and 25 discharged, of whom 14 were benefited. This institution is the only one in Pennsylvania where epileptics are received and given employment in order to improve their condition and it is hoped that

the lack of funds which now exists will be remedied so that the many applicants which the institution is at present compelled to turn away may receive treatment. Dr. Wharton M. Sinkler is the president; Charles M. Lea, vice-president; Dr. S. W. Morton, secretary, and S. W. Climenson, treasurer.

At the conversational meeting of the Pathological Society to be held on April 27th, Professor R. H. Chittenden of Yale will be the speaker of the evening.

Mayor Jeffries of Chester has appointed Dr. S. V. Hoopman a member of the Board of Health to succeed Dr. F. Evans.

Dr. Addinel Hewson, Demonstrator of Anatomy at the Jefferson Medical College, was last week presented with a case of surgical instruments by the undergraduates on the occasion of the twentieth anniversary of his connection with the college. The Guiteras Medical Society of the University of Pennsylvania last week gave a farewell dinner to their patron, Dr. John Guiteras, who severs his connection with the university this spring to settle in Havana. R. K. McClanahan, assistant-surgeon, U.S.N., has been assigned to duty at the Naval Hospital in this city.

The total number of deaths occurring in Philadelphia during the week ending April 8th, as reported at the Health Office was 584, of which number 142 occurred in children under five years of age. The total number of new cases of contagious diseases was 365 reported as follows: Diphtheria, 38 cases with 2 deaths; scarlet fever, 31 cases with 3 deaths; typhoid fever, 296 cases with 48 deaths.

OUR LONDON LETTER.

[From Our Special Correspondent.]

THE "GOVERNMENT" SCHOOL OF TROPICAL DISEASES
—DR. MURRAY'S LECTURES ON THE PATHOLOGY OF THE THYROID GLAND—PRAISE FOR GENERAL WOOD, THE AMERICAN GOVERNOR OF SANTIAGO—SIR DOUGLAS GALTON—CINNAMON AS A SPECIFIC IN INFLUENZA.

LONDON, March 29, 1899.

PRECISELY what we foreboded has happened in the development—proceeding with cretinic slowness—of the much-trumpeted "Government" School of Tropical Medicine. A committee has been formed headed by Sir Donald Currie the "Ship King," and a public dinner announced to be addressed by Secretary Chamberlain himself in a winning appeal to the dear public to come nobly forward and subscribe *four-fifths* of the building fund and *two-thirds* of the annual income of this "Imperial" scheme. Could a more disgraceful affair be imagined? In America we are quite accustomed to seeing private individuals or companies endeavoring to get the Government to bear the burden of their financial enterprises, while they draw the profit, but we are not quite familiar with the spectacle of a great government stooping to wheedle and cajole private charity into paying three-fourths of the expenses of a State enterprise of which the State is to have all the credit and two-thirds of the benefit. It is as if a fond parent were to say to a small college, "I

will build you a dormitory and pay full tuition-fees for the instruction of all my family of children if you will call the whole institution by my name!" All the Foreign Office promises toward the support of the school is to pay tuition-fees for its Colonial medical officers, *estimated to reach about \$5000 a year*. The Honorable Joseph seems to have been taking a leaf out of the book of his illustrious namesake who engineered the celebrated "corner" in Egyptian wheat a few thousand years ago.

As a refreshing contrast the private School of Tropical Medicine at Liverpool has just called the foreign consuls of the port together, announced through Professor Boyce that they will be ready for students and patients April 22d and asked them to kindly bring the fact before the attention of their respective governments and assure them that either their sick seamen or ship-surgeons and colonial medical officers will be cordially welcome at the hospital and school. The "Government" School talks hopefully of an opening in October! But that largely depends on how the public responds and judging by its inadequate response to the Prince of Wales' Hospital Fund, it would seem as if the limit of its charity had been almost reached. No wonder the medical profession and hospitals were wary of the scheme.

Altogether the present Government and House are not exactly laying up for themselves treasure in Heaven by their conduct of questions of public health. Beginning by repudiating their promise to introduce a Revaccination bill, they continued two weeks ago by refusing to raise the flash-point of petroleum from its present disgracefully and murderously low standard of 73°, which stands responsible for nearly 200 deaths a year in London alone. While this week it has weakly surrendered to railroad clamor and "taken the starch out of" the bill compelling railroad companies to equip their cars with automatic couplers and thus save a terrible waste of human life. In the petroleum debate several of the States, Iowa in particular with its flash-point at 103°, were held up as examples of perfection to their British cousin.

Dr. George R. Murray's lecture at the College of Physicians on the "Pathology of the Thyroid Gland" have been of great interest. In the one of last week he took the ground that exophthalmic goiter and myxedema are opposite poles of our secretion flow. This he graphically expressed in the form of a series of equations. Taking the normal amount of thyroid secretion at 100, secretion + 25 or 125 = mild exophthalmic symptoms, + 50 = moderate and + 100 or 200 = severe types of the disease. Conversely secretion - 25 or 75 = a mild form of myxedema, - 50 = a severe form and - 100 or complete suppression of the secretion = cachexia thyropriva. Exophthalmic is made worse, ordinary goiter better by thyroid extract and a series of most suggestive sections were shown in which the conditions of a monkey's thyroid hypertrophying after removal of the other lobe were almost identical with that of a thyroid from a fatal case of Graves' disease.

A number of cases are now reported where myxedema followed severe exophthalmic goiter, just as atrophy follows hypertrophy in other organs and Guriquez and Bal-

let have succeeded in producing typical exophthalmic symptoms in dogs by excessive thyroid feeding.

He advised removal of a part of the hypertrophied gland in exophthalmic goiter, a procedure which has given some admirable results, but which has been followed in some cases by a violent and in one instance fatal exaggeration of the symptoms, the pulse reaching 150 and even 180, believed to be due to squeezing and manipulating the gland during the operation and thus forcing out an excessive amount of its secretion into the blood-vessels. At all events in the later operations where such pressure was carefully avoided no such symptoms occurred.

The Ophthalmological Society of Great Britain at its last meeting voted to follow the example of the British Medical Association and admit women physicians to its membership.

The influenza epidemic still rages, and though the form continues mild and of the nervous type in the vast majority of cases, yet an unpleasant number of pneumonitic sequelæ developed last week and brought the death-rate for London up to 100 again from 90 of the week before.

Spurred by the sad death of Dr. Boyd, Rector of the University of Glasgow, from a dose of carbolic-acid solution taken in the night in mistake for a sleeping mixture of chloral hydrate, the Government has at last announced its intention of according to the oft-repeated urging of the profession that carbolic acid should be placed on the list of poisons and dispensed only as such. Had this been done a month ago this fatality, like many previous ones, would have been avoided, for, by an excellent provision the English law requires poisons not merely to be labelled as such, but dispensed only in deeply fluted bottles, so that warning would be given by the sense of touch, even in the dark.

Our General Wood is decidedly the popular hero of the day over here, now that the Sirdar has gone back. On all hands you hear, "That's what comes of having a man with medical training in a responsible official position." His achievements at Santiago are admired everywhere and regarded as a triumphant vindication of American unselfishness and competence, and no small object-lesson of the high civic value of modern medicine.

The death of Sir Douglas Galton has removed one of the pioneers of military hygiene. He early distinguished himself by insisting upon paying even more attention to the building of barracks and sanitation of camps than to the construction of earthworks and trenches, though only a Royal Engineer and not a medical officer. To him belongs the credit of many of the hygienic reforms in army management, and since his retirement he has been actively connected with the Parkes Museum of Hygiene, of which he was one of the founders.

The principal points of fresh interest brought out by Professor Burdon Sanderson of Oxford in his lecture upon "The Electric Concomitants of Motion in Animals and Plants," before the Royal Society last week, were two, one that the immediate result of stimulation of a muscle at any point is always oxidation of its tissue at the point of irritation, with liberation of acids. This breaking-down of tissue gives rise to a change of electric poten-

tial, so that if this point of the muscle be connected by a good conductor with any still unimpaired region of its mass a current is at once set up. This so-called "muscle-current" is, however, solely due to the differences in electric potential between the particular regions at which the electrodes are applied, and has no necessary effect whatever upon the stretch of muscle lying between these points. In fact the familiar electric changes in contracting muscle are merely a symptom of contraction-oxidation, and not its cause. The other, that a similar change of electric potential between the stimulated and non-stimulated areas of the leaf accompanies the movements of "sensitive" plants, *e.g.*, *Dionaea* and *Drosera*.

A writer in the *British Medical Journal* strongly recommends cinnamon as a "specific" in influenza. He has given it in the form of a decoction or tabloids in large doses in previous epidemics, and in no case where the treatment has been begun within twenty-four hours of the commencement of the attack has he failed to get his patients up and about again in five days.

Cinnamon, like nearly all other aromatic spices, is an excellent germicide, and has several times been recommended as a substitute for carbolic, iodoform, and other less fragrant antiseptics. Possibly it may have a discouraging effect upon the spirellum of Pfeiffer, but inasmuch as the period of prostration in uncomplicated cases of influenza averages only from three to five days, we must confess that we are of the opinion that the gentleman would have got nearly as good results by simply keeping his patients in bed and prescribing any other hot drink, such as lemonade, weak gin-sling, or even the renowned "slippery-ellum," in abundance.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

ACUTE ELEPHANTIASIS OF THE SCROTUM—DANGER OF INFECTION IN TUBERCULOSIS—ON THE USE OF MASKS IN TUBERCULOSIS—RAISING THE ARM IN PARALYSIS OF THE DELTOID—APPENDICITIS IN SITUS INVERSUS—AFFECTIONS OF THE LUNGS IN TYPHOID FEVER—A CASE OF PARTIAL HYPERDROSIS—IMPROVEMENT OF DEAFNESS UNDER MECHANICAL EXERCISES.

AT the Berlin Medical Society, February 15th, RUBINSTEIN showed a case of acute elephantiasis of the scrotum occurring without immediate venereal precedent in a man aged twenty-three years, who lifted a very heavy weight and noticed almost immediately a swelling of both sides of the scrotum. One week later the scrotum was three or four times its normal size while the penis was not affected at all, nor were the testicles larger than normal. Two years previously, the glands in the right inguinal region had been resected on account of acute inflammation. A few similar cases have been reported, produced as was this case, by a sudden strain in a person suffering from chronic gonorrhea, but in all of them the inguinal glands of both sides had been resected. The swelling was considered that of elephantiasis since several punctures failed to extract any fluid.

At the session of February 22d, CORNET read a paper

on the danger of infection in tuberculosis. It has been usually accepted that infection takes place through the dust of dried sputum. This view has been disputed, especially by Flugge, who holds that infection takes place almost exclusively from the fine drops which are expelled in coughing. If this view is accepted the prophylactic measures at present employed must be vastly altered. CORNET conducted a series of experiments in order to settle the question. He easily proved that the dust of dried sputum may be an important source of infection. The failure of some investigators to produce tuberculosis in animals by using such dust was one of the chief points in Flugge's argument. CORNET shows that such failures were due to errors in the technic. If the dust is fine enough to be breathed into the deepest portions of the lungs infection readily follows. A single mass of sputum expectorated by a phthisical patient contains more bacilli than are found in the fine drops which are coughed out into the air by dozens of patients. An estimate has been made from the examination of masks worn by these patients, that the number of bacilli so coughed up in one day, is only one three millionth part of the number contained in the expectorations for one day. The testimony of experience coincides with that of these experiments. Under measures directed toward the prevention of infection through expectoration the percentage of cases of tuberculosis in Prussia has steadily diminished. Under these circumstances, it seems that it is an unnecessary hardship to compel a phthisical patient to wear a mask day and night, as some physicians have advised.

In the discussion of this paper HAUPT said that he looked upon tuberculosis as a constitutional disease, rather than as an infectious one. Therefore, it was a matter of indifference to him whether the statement of CORNET or that of Flugge was accepted. If either theory was correct, tuberculosis ought to be conveyed from husband to wife or vice versa far oftener than is the case. He once investigated 1500 cases of phthisis in married people, and found that in 93 per cent. the surviving party remained healthy. In the 7 per cent. of instances in which the surviving party suffered from phthisis he often found a hereditary taint. The most important factor in reducing tuberculosis in a community is to improve the conditions of life of the people.

FRAENKEL insisted on the value of a mask of gauze for phthisical patients. It is the duty of a physician, he said, to do all in his power to limit the spread of disease, and the infectious power of the sputum is beyond all doubt. These masks have been shown to catch a certain number of bacilli, and they therefore are of use in limiting the spread of the disease. They are only advised under those circumstances in which the patient is in a closed room with other individuals, for example in the family or in a hospital. While out of doors it is not necessary to wear them, as the danger of infecting others by coughing is under those circumstances at a minimum.

LAZARUS objected to the use of masks because they make it more of an effort for the patient to breathe. He considered that the proper disposition of the sputum is a sufficient safeguard against the spread of the disease. In

proof of this he called to mind the fact that in his hospital service, although phthisical patients and others were mixed indiscriminately in the wards, he had seen no case of infection arising in the hospital. He warmly advocated the erection of sanitaria in suitable localities, rather than the setting aside of certain hospital wards for the use of phthisical patients. In the former institutions not only are many patients benefited to the extent which it is possible for any such patient to improve, but they learn how to take care of themselves so as not to be a source of danger for those around them, and with this knowledge their spirits return, and the depression leaves them which has come upon them as the result of the widespread feeling in the community that every phthisical patient is a possible source of contagion to his fellows.

At the session of March 1st, KRON showed a patient aged ten years, who had a complete paralysis of the deltoid muscle, due to an anterior poliomyelitis in the first year of life. In a short time after treatment was begun, he had succeeded in developing the use of the trapezius, serratus, supraspinatus and pectoralis major muscles, until the arm could be raised above the head. The arm was first raised forward by the clavicular portion of the pectoral and held there until the muscle was exhausted. When this exercise had developed its strength, attempts to move the arm sidewise from its elevated position were made, and after a short time the arm could be raised direct from the side of the patient.

RATKOWSKY mentioned a case of recurrent appendicitis occurring in a physician who had complete situs inversus of all the organs. The left-sided attacks were at first ascribed to a stenosis of the sigmoid flexure, but their further recurrence, led to the discovery of the inversion of the organs, and as all the symptoms and the results of physical examination agreed with this theory, there seemed to be no reason to doubt that the diagnosis was the correct one. The remarkable thing about the history of the case is that the inversion of the organs had not been discovered either by the numerous physicians who had examined the patient in these attacks, nor by the military examiners, nor by the patient himself in his student days. The heart sounds could be heard on the left side, though feebly.

At the Berlin Union for Internal Medicine, February 26th, FRAENKEL spoke of the affections of the respiratory apparatus in typhoid fever. He mentioned three classes of such cases: (1) those of fibrinous pneumonia with typhoidal symptoms; (2) those in which a typhoid fever is complicated with true fibrinous pneumonia, and (3) pneumotyphoid, in which the lesions are caused solely by the typhoid bacilli. The first form corresponds to the so-called asthenic pneumonia, which cannot be sharply differentiated from the sthenic form. The typhoidal symptoms are often combined with diarrhea and meteorism. In the first days there is nothing definite in the lungs, as the disease begins in the central portions. In these cases the pneumococcus was regularly found, especially in fluid from the middle portion of the lung. The second form was seen by Fraenkel only 6 times in 500 cases of typhoid observed by him in the past 9 years. This mixed infec-

tion may occur in any stage of typhoid fever, but it gives only a faint picture of pneumonia, altering the typhoid curve only slightly, causing a slight rise of temperature, but not the crisis seen in pneumonia alone. The diagnosis is more easy to make if it occurs during the convalescence. In reference to the third form there are two secondary questions to answer: Can the typhoid bacillus produce pneumonia? and if so in what form? and, is there such a thing as a primary pneumotyphoid? Of the latter there is yet no positive evidence. There is a secondary migration of the typhoid bacilli from the blood into the lungs, producing a hypostatic pneumonia. But under these circumstances they only act in conjunction with other germs in setting up the pulmonary inflammation. But typhoid bacilli may cause pneumonia, as the following case shows: A young man convalescing from typhoid fever, in the fifth week from defervescence, developed a new rise of temperature. There was an area of dulness found posteriorly, and a needle thrust through the chest wall at this point drew out reddish pus. Later a serofibrinous exudate formed there. From both of these, pure cultures of the typhoid bacillus were obtained. The case was a typical pleuropneumonia which went on into contraction, the disease tending to spontaneous cure.

At the Imperio-Royal Society of Physicians, at Vienna, March 3d, KAPOSI showed a case of partial hyperhidrosis in a boy aged fifteen years. In the first year of life he had perspired profusely from the skin over the nose. Until the eighth year the area so affected gradually increased until the sweat came from lips, chin, ears, front of the neck, arms, and chest, as far as the sixth rib. In the seven years following, the condition spread very little so that at the fifteenth year the skin was affected only a finger's breadth below the costal margin. The sweat pours out quickly the moment anything cold comes in contact with the skin or mucous membranes. When the patient takes violent exercise and becomes warm, especially in the summer, this abnormal secretion of sweat does not occur. There was no organic lesion demonstrated except a cyanosis of the fingers, nose, etc. The patient had also a kyphoscoliotic spine, which, however, gave him no trouble. Ligature of the arm prevented the occurrence of sweating in it, but as soon as the ligature was removed the sweat poured out in more than its usual volume. The diagnosis of the condition was thought to be a hydromyelia of the cervical and dorsal cord.

URBANTSCHITSCH replied to the criticisms which had been made of his method of treatment of deafness by systematic exercise (MEDICAL NEWS, March 25th, p. 381), saying that the pathological anatomy of the middle ear is not so well known that one could disprove the results of treatment by an appeal to the impossibility of changing pathological conditions. He had seen, for example, good results follow the exercises in patients who were deaf for ten or fifteen years as a result of meningitis. The exercises are sometimes not carried out with sufficient persistence. He had been able to achieve considerable improvement in the case of a girl who had been treated without benefit by another physician by the same method, but less vigorously. It has been estimated that

twenty-seven per cent. of the deaf are amenable to treatment by this method; and as there are about 200,000 deaf persons in Europe, the total number that may receive benefit is no inconsiderable one. He emphasized again the fact that the treatment does not need to be carried on by a specialist, but that any physician, or any intelligent patient or friend can look after its faithful performance.

SOCIETY PROCEEDINGS.

HARVARD MEDICAL SOCIETY OF NEW YORK.

Regular Meeting, Held February 25, 1899.

THE President, DR. HENRY C. COE, in the Chair.
The paper of the evening, entitled

EMPYEMA OF THE FRONTAL SINUSES AND INTRACRANIAL INFECTION

was read by DR. CHARLES L. GIBSON. Suppurative conditions of the frontal sinuses are comparatively rare so that it seems worth the while to report the following case which has some special and interesting features:

J. C., male, aged thirty-two years. Entered St. Luke's Hospital, February, 1897. In September, 1895, a swelling which had appeared at the inner angle of the left orbit was lanced and pus evacuated. A suppurating sinus was left which failed to close. About a year later the frontal sinus was opened and the cavity drained extensively. No opening was made into the nose. The sinus persisted, continuing to discharge a small amount of pus. The patient had had several polypi removed from his nose during the past two years. On entering St. Luke's Hospital he complained of the discharging sinus and persistent frontal headache, most marked on the right side. He had besides lost some weight. Physical examination revealed nothing new.

An operation under ether was performed, a horizontal incision being made in the line of the left eyebrow, including the fistulous tract at its central portion. This tract was freely enlarged and considerable pus evacuated. The cavity was scraped with a curette, except the posterior wall, which was not touched for fear of perforating the softened bone. The curette easily penetrated the septum into the right frontal sinus and let out two drams of pus. This appeared to be under tension, though there was no pulsation. An attempt to pass a probe on the left side downward into the nose failed, but it passed easily from the nose upward into the left sinus. It was considered unnecessary to make a second opening over the right sinus on account of the opening externally through the left sinus, and below into the meatus of the nose. A rubber drainage-tube was passed from the external opening through the nose. Two days after operation meningitis developed and the patient died after nine days. It had been noticed that washing out of the frontal sinuses aggravated the symptoms, and it was judged from this that a communication with the brain cavity existed. The autopsy showed pus in the pit of the base of the brain. Flattening of the under surface of the

frontal lobe on the left side was also noted. The posterior cranial wall of the right frontal sinus was entirely wanting, there being a loss of substance one inch in diameter. The opening was in the form of a circle with smooth, well-defined edges. The dura here was very much thickened and covered with granulation tissue and blood. Both cribriform plates were carious but especially the right one. The cerebral wall of the left frontal sinus was eroded and showed two minute openings into the cranial cavity.

The condition of the left sinus had been known, though erosion of the posterior wall had been suspected as a probability during life, but the failure to open the right sinus externally rendered exploration of its walls and the recognition of its condition impossible.

This condition of almost complete absence of cranial wall on the right side was tried to be accounted for in three ways: (1) Destruction of the bony wall by extension of a suppurative process originating in the frontal sinus. (2) Destructive inflammation in the inner table of the frontal bone. (3) Structural deficiency of the inner table at the usual site of the cerebral wall of the frontal sinus.

It was first thought that it was a result of the empyema, but the extent and symmetry, the well-defined and smooth edges of the bony defect made it difficult to reconcile these appearances with the ones usually due to erosion. In the latter case we ought to find softened, carious, irregular edges, or a cribriform appearance, such as was found more or less on the left side. Osteomyelitis of the bone itself was then considered because it was possible that a process originating in the bone would be more likely to result in a loss of substance of better defined limits than in destruction by erosion. But this condition, osteomyelitis, must be exceedingly rare. The speaker quoted three cases detailed in the literature as osteomyelitis, but which he concluded were called so on insufficient grounds, the symptoms, etc., pointing as well to empyema as to osteomyelitis. Moreover in his own case he was unable to make the primary symptoms agree with a beginning osteomyelitis, and he consequently thought that this was not to be considered. There remained then the structural defect. He was able to find but one case of such a malformation in the literature. This was an opening about the size of a lentil, the edges being sharp and thin in the orbital roof of the left side. The lining membrane of the frontal sinus was directly in contact with the dura.

In this case there was no disease present. This except for the empyema corresponds with the opening found in this case. Defects of the outer table leading to the orbit have been noted with comparative frequency, and it seems reasonable to believe that the causes responsible for the latter condition may sometimes affect the cerebral wall also. The speaker believed these are more common than suspected but have been overlooked.

This case also illustrates the fact that in double empyema one should not be satisfied with an opening into one cavity even though the cavities communicate. If an external opening had been made in this case into the right frontal sinus the condition found at autopsy would have been recognized during life.

DISCUSSION.

In response to the question as to what he thought of the advisability of flushing out the sinuses after freely opening them in such cases Dr. Gibson said that theoretically it would seem usually to be good surgery, but that in case long continued pressure might have worn the inner bony plate of the sinus very thin, or where long-continued chronic inflammation had weakened its resisting ability to external force it was very necessary not to make the irrigation under any pressure. It seems clear also from the present case that there may exist certain congenital defects of the posterior bony plate of the frontal sinus especially which may make flushing of the sinus after and during the operation dangerous. This last danger can only be anticipated and avoided by making a good-sized external opening that will permit of free inspection of the field of operation and its immediate neighborhood.

DR. ROYAL WHITMAN thought that in cases of persistent frontal sinusitis, such as this, operation is indicated even though it involves a certain amount of risk and would be accompanied by a certain amount of mortality. As is the case of chronic mastoiditis, a purulent focus in these cases continually exists close to the cranial cavity separated from the membranes of the brain only by a comparatively thin bony plate which the pressure of a purulent collection and chronic inflammation are continually making weaker. The indication is evidently to open it freely and allow it to drain, and if possible to remove all sources of infection in the diseased region.

In conclusion Dr. Gibson said that he does not think that the mortality of operations for frontal sinusitis need be large, but where anomalous conditions exist as in the present case the patient's chances of recovery are very much lessened after operative manipulation and especially irrigation unless the condition has been recognized and special precautions taken.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

Stated Meeting, Held February 15, 1899.

THE President, WILLIAM STEVENS, M.D., in the Chair.

HAIR-PIN REMOVED FROM THE BLADDER.

DR. S. H. DESSAU: Some weeks ago a young woman was brought to me by her mother with the following history: Five years ago she suffered from some uterine trouble, for which a pessary was introduced. This she had been taught to remove for the purpose of cleansing it. Two months previous to being seen by me she had attempted to remove the pessary, as usual, but was unable to do so. Being of an ingenious turn of mind, she took a hair-pin, bent the blunt end of it, and tried to hook the pessary down. She failed to do this, but lost the hair-pin, which slipped out of her fingers and entered the uterus, as she supposed. She told no one of this, and soon after began to feel some discomfort, especially during micturition, and this increased to such an

extent that the family physician was consulted. It is said that he made a thorough examination, and came to the conclusion that the girl was hysterical, and that there was nothing the matter with her. The symptoms became more aggravated, and she soon was unable to attend to her duties as buyer for a millinery store. Micturition was very frequent, and was accompanied by violent pains, and it was decided to seek further advice.

After hearing this history, I decided that the case was worth looking into, and sent her to my friend, Dr. Vineberg, who is skilled in the use of the cystoscope, to have her bladder examined, and he discovered the hair-pin lying transversely across the bladder, and removed it with considerable difficulty through the cystoscope. On the posterior wall of the bladder there were a couple of inflamed areas which he touched with nitrate of silver. The symptoms, of course, have since disappeared. In using the cystoscope, Dr. Vineberg employs the Kelly method of inflating the bladder with air while the patient is in the knee-and-elbow position. I imagine that it would be much easier to explore the bladder in this way than when it is filled with water, as in the Nitze method. The interesting feature of the case is that the patient before coming to me was under the care of two other physicians, one of whom made a vaginal examination, and yet neither suspected that the bladder was the cause of the symptoms.

DR. A. M. JACOBUS: I have met with several instances in which hysterical girls have introduced various articles, such as glass and hair-pins, into the vagina or bladder, and have operated for the latter condition. In another case which came under my observation the patient had introduced a hair-pin into the uterus in order to bring on an abortion. It was removed with great difficulty, as it had passed beyond the os internum, and the points were directed downward and were widely separated.

In regard to the indiscriminate use of the pessary, I recently saw a woman who was wearing a pessary which had been introduced by a physician while she was in Dresden last August, and had not been looked after subsequently. She complained of great pain, and had a bloody leucorrhœa. Upon making an examination I found that the pessary, which was of the ordinary Smith pattern, had cut several grooves which were raw and bleeding on each side of the vagina. It was too wide and too long, and entirely unsuitable. The woman had a retroflexed uterus, firmly bound down by adhesions, and it was criminal to apply a pessary in such a condition. Pessaries are often used unnecessarily, particularly in single women, in whom they should never be used. At best, they are merely temporary makeshifts.

NEW METHOD OF OPERATION FOR CONVERGENT STRABISMUS.

DR. EDWARD S. PECK: I wish to call the attention of the Society to a new method of operating upon squint-eyes which has been suggested by Professor Panas of Paris, whose operation for cataract is so much in vogue at the present time. I have employed this method with

success in the case of a boy, fourteen years of age, who had squinted for thirteen years. If my memory serves me right, Professor Sayre employed the same principle in treating contracted tendons, and the maneuver is so simple and easy that it seems to me worthy of mention. It consists merely of stretching the muscle by means of strabismus hooks before it is cut in order to overcome the dynamic contracture of the muscle. Dr. Roosa, who has operated in more than twenty cases by this method, recently called the attention of the New York State Medical Society to the procedure. Simple tenotomy is exceedingly unsatisfactory in many cases of strabismus—even in a young subject the result is doubtful, and often the operation has to be repeated again and again. I think the profession should know that success does not follow in fifty per cent. of the cases, and that something besides mere cutting of the muscle is necessary.

ANTITOXIN IN DIPHTHERIA.

DR. DESSAU: Last winter I reported a case in which I had successfully employed antitoxin in diphtheria, and this evening I desire to report another. There seem to be efforts made in the neighborhood of New York to cry down the use of antitoxin, and I think we should fight them. To-day I received a pamphlet consisting of an argument against this method of treatment in the shape of three papers which have appeared in the *Medical Record*. My experience with antitoxin has been most satisfactory. The last case in which I employed it was an especially bad one of pharyngeal and nasal diphtheria, seen on the third day of the disease. The dose employed was 2500 units, the largest I have ever given. The only other treatment employed was a 1-to-3000 solution of bichlorid of mercury, containing a little tartaric acid, and thorough irrigation of the nose with normal salt solution by means of a fountain-syringe. It was a tenement-house case, but the mother carried out this part of the treatment better than do most women of her class. Improvement was noticed at once. A second dose, which I had expected to give, was not required, and the child is now up and about. An immunizing dose of 750 units was given to a year-and-a-half-old baby in the same family with the result that it has escaped infection.

TWO CASES OF PERFORATIVE ULCER OF THE DUODENUM.

DR. JOHN F. ERDMANN: I have here two specimens of perforative ulcer of the duodenum which were removed within two or three days of each other. Operation was performed thirty-six hours after perforation in the first case, and twenty hours after in the second case. The result in both instances was unfortunate, neither patient surviving. Both were males, about thirty years of age, who had previously been healthy. Perforation took place in the first portion of the duodenum in each case. Abdominal distention was a marked symptom.

DR. CHARLES H. KNIGHT then read the paper of the evening, entitled

FOREIGN BODIES IN THE LARYNX. (See page 458.)

DISCUSSION.

DR. PECK: I was impressed with the closing paragraph of the paper in regard to partial section of the thyroid cartilage in which the author says that the section should be confined to the lower part of the cartilage, leaving intact the upper part where the vocal cords are attached. I was also impressed by the ingenuity which was employed in the removal of foreign bodies from the larynx. I have removed more neoplasms than foreign bodies, and in some of the cases it was necessary to make a very extensive section of the thyroid cartilage but I have never seen this followed by bad results.

DR. NEWMAN: Two instances of foreign body in the larynx which have come to my knowledge deserve mention. In the first the patient was taken to a drug-store and a passing physician was called in to attend her. Having no instruments with him he administered separately the two parts of a Seidlitz powder and the effervescence which was produced in the stomach caused vomiting and the expulsion of the foreign body from the larynx.

The second case was that of a little girl who had inhaled a sprig of a cedar tree about an inch and a quarter long. It could be felt in the larynx but was so firmly lodged that it could not be gotten out by the usual methods. It was finally removed by means of a pair of forceps. A very useful instrument for the removal of foreign bodies in the larynx is made of stiff bristles in the form of an umbrella which is introduced closed and then opened. Upon removing it the foreign body will usually be found on the upper surface of the bristles.

DR. BLAKE WHITE: A feature which has impressed me greatly is the remarkable degree of tolerance shown by the larynx for foreign bodies which have passed the epiglottic plane. Comparatively very little annoyance is caused after this point has been passed. The author has well illustrated this fact by narrating cases in which foreign bodies were detected only by the use of the laryngoscope. It is well known that oily solutions and even solutions of glycerin cause but little disturbance when injected into the bronchi. By way of emphasizing this point I recall an operation skilfully performed by Dr. S. H. Weeks of Portland, Maine, which I had the pleasure of witnessing. A boy of fifteen had inhaled a small tin-whistle which had traversed the trachea and become lodged at the bifurcation of the bronchi, where it was located by means of the X-ray. Tracheotomy was performed and several fruitless attempts made to remove it with forceps. Finally, by inverting the patient, the whistle was dislodged so that it was easily removed by long tracheal forceps. In another case a penny was expelled from the larynx of a child by the colored nurse seizing him by the feet and shaking him violently—a simple but effective method.

DR. DESSAU: I wish to emphasize the point referred to in the paper in regard to the frequency with which this accident occurs. The condition is often overlooked and the symptoms may be ascribed to croup. For example, a child was once brought to me with symptoms of croup. I examined the throat but found it normal. On the fol-

lowing day the condition was the same, but the mother mentioned the fact that before the onset of the throat-symptoms the child had been playing with a safety-pin, which had mysteriously disappeared. Upon introducing my finger into the child's throat I at once felt the point of the pin and was able to remove it without difficulty. Exploration of the larynx with the finger is of great value in these cases. I would like to ask the author if he considers it possible to employ the laryngoscope in young children, say from two to three years of age.

DR. FRANK GRAUER: I once made an autopsy in a case in which death was produced by the presence of a foreign body in the air-passages. A young lad was playing in Bryant Park when he suddenly dropped dead. The coroner gave a certificate giving heart failure as the cause of death. Later, however, it was decided to hold an autopsy, and it was then found that the boy had swallowed a collar-button, which had lodged in the lower part of the rima glottidis, completely closing it.

I know of another instance in which a German died suddenly in a Bowery restaurant. Autopsy showed a piece of frankfurter in the man's larynx. In still another case death was caused by sauerkraut getting into the air-passages. All these cases show that instances of sudden death should always be investigated.

DR. ERDMANN: I would like to ask Dr. Knight if he has ever heard of removing foreign bodies from the air-passages by means of suction. In discussing Rushmore's celebrated case, that of a man who inhaled a cork, Gersster referred to a method of removing foreign bodies by means of a rubber tube introduced into the larynx or bronchi and producing suction.

DR. KNIGHT, in closing: The great obstacle to the removal of a subglottic foreign body is spasm of the vocal bands.

In regard to suction, I have never seen any mention made of the method referred to by Dr. Erdmann. It might be feasible under certain circumstances. There is a case on record in which intubation was performed with the result that the foreign body was coughed up into the tube and removed with it.

With reference to the use of the laryngoscope in young children, I do not think it is possible to employ it satisfactorily in the majority of cases. Children are so intractable that a laryngoscopic examination should be made under anesthesia if it is to be of any service. The method of Kirstein is especially recommended for children. It is, however, very disagreeable and painful because the head is so much extended.

There seems to be a difference of opinion in regard to the inversion of children who have inhaled a foreign body. Some say that this should never be done without preliminary tracheotomy as there is danger of the foreign body becoming lodged in the rima glottidis and in this way completely shutting off the air. The majority of authorities are in favor of it, nevertheless, especially if the nature of the foreign body be known. I once saw a child who was almost moribund cough up a piece of coal as large as the tip of my finger after inversion and a good shaking.

I do not wish to claim originality in making partial section of the thyroid cartilage. I have seen this method described in some foreign medical journal. In cases of removal of neoplasms in children I am of the opinion that complete division of the thyroid should be avoided because of the difficulty in approximating the vocal bands when the wound is closed. When partial section is made we have a guide by which they may be accurately adjusted.

SCIENTIFIC JOTTINGS FROM TROPICAL COUNTRIES.

YELLOW-FEVER FOCI ON THE MEXICAN COAST—ANESTHESIA AT HIGH TEMPERATURES AND LOW BAROMETER—CALOMEL IN PNEUMONIA—THE YELLOW-FEVER BACILLUS AND MOLDS—PRESENT MORTALITY OF YELLOW FEVER.

In the *Boletin del Consejo Superior de Salubridad*, No. 5 (City of Mexico), Dr. Liceaga who in July, 1898, in a communication to the Committee on Yellow Fever of the American Association of Public Health, declared that there were but two foci of yellow fever along the Mexican coast bathed by the waters of the Gulf of Mexico, these two foci being in the Canton of Vera Cruz and the districts situated to the north of the peninsula of Yucatan, now wishes to modify this declaration. At the time it was made the epidemic at Tampico and the cases at Campeche had not been studied sufficiently to make one sure that they had not been imported. It seems clear now, however, that the infection was not imported into these localities so that he does not feel in a position to state positively at how many points on the Mexican Gulf coast yellow fever may be endemic.

The *Gaceta Central de Mexico*, tomo XXXV., No. 22, reports a discussion before the National Academy of Medicine, in which it was agreed by those who had been present at operations in Paris and in the Northern part of the United States, that much less chloroform or ether was required to produce anesthesia and the patients were gotten under the influence of the anesthetic sooner than in Mexico. Two factors were suggested as bringing about these differences, first, and most important, the low atmospheric pressure of the high tableland upon which Mexico is situated, and secondly, the higher average temperature of the Mexican climate, both these factors leading to a vaporization and waste of the anesthetic. [It would be interesting to know from those accustomed to anesthetize in very warm rooms and from our Southern medical men if they have noticed that climate makes a difference in the amount of the anesthetic required, and from the profession in Denver and places at correspondingly high altitudes if they have noted the influence of the low barometer in the same way.]

In *El Monitor médico* of Lima, Peru, No. 248-9, Dr. C. M. Vivanco reports fifteen cases of pneumonia treated by small doses of calomel in which the results obtained, as regards comfort of the patient, lessening of fever, completeness and promptness of the crisis were so

satisfactory that he thinks some derivative of calomel in the circulation has a direct bactericidal action upon the pneumococcus.

In a clinical lecture published in the same journal Sanarelli insists on the symbiotic relations between molds and his bacillus icteroïdes. In cultures the bacillus icteroïdes grows much more luxuriously in the presence of a mold and the radius of influence of the mold can be easily distinguished. In general Sanarelli thinks that it is in molds that the bacillus icteroïdes is sheltered during seasons of abeyance of the fever. This microbial saprophytism he considers very interesting and an exemplification of a biologic principle to which not sufficient attention has been called. It is this symbiosis or parasitism of the bacillus icteroïdes and molds that causes yellow fever to break out so often on shipboard where molds, because of the constant dampness are especially luxuriant. This fact explains also the affinity of yellow fever for river bottoms, for coasts, and for marshy or swampy, low-lying, moist neighborhoods generally.

According to the *Revista Medica de S. Paolo* (Brazil, Portuguese) the number of cases of yellow fever during the three months, June to September, in the Province of Santos (40,000 inhabitants) was 294. Of these 178 died, a mortality of 60.54 per cent. In the little watering-place of Guaruja where the sanitary conditions were considered reasonably good 18 cases occurred with 12 deaths. All but 7 of the cases were in foreigners, all of whom had been less than four years in the country and most of them only a few months. [An interesting comparison at once suggests itself between these statistics and the much-better results secured by the much-civilized army medical department in its experience with yellow fever during the late war.]

REVIEWS.

GLAUCOMA; ITS SYMPTOMS, VARIETIES, PATHOLOGY, AND TREATMENT. By ALEX. W. STERLING, M.D., C.M. (Edin.), D.P.H. (Lond.). Atlanta, Georgia. St. Louis: Jones H. Parker, 1898.

THIS wide and intricate subject is of the greatest interest to the ophthalmologist, whether it be from the theoretical standpoint of etiology, of the various hypotheses as to pathogenesis, or of the dynamic mechanism involved. The practical interest in the symptomatology and treatment of glaucoma, is, however, shared by many general practitioners, as the manifestations of this ocular affection may, at times, so closely resemble those of other diseases that their true origin is easily overlooked. The unfortunate result is that valuable time is wasted, or improper remedies applied. Not infrequently vision has been irreparably damaged before the real nature of the case was recognized.

As the author pertinently remarks: "This is a condition of matters which every ophthalmic surgeon of any experience has had frequently to deplore for a tentative diagnosis is usually easy without an ophthalmoscope, and

all that is wanted is that the practitioner bear in mind, firstly, that there *is* such a disease as glaucoma, whose symptoms may much resemble rheumatism and neuralgia of the head and face, including the teeth and ear, sick headache, as well as some common forms of inflammation of the eyes, and that it is sometimes attended by fever and vomiting; secondly, that atropine *is not* a panacea for every ocular ill, but on the contrary is harmful in many, especially in glaucoma, and should never be used except with full understanding of its action in the disease for which it is employed, and thirdly, that he make himself acquainted with the resistance or "tension" of normal eyes when palpated as for an abscess, and remember that in glaucoma this tension is greater than normal."

The volume, whose contents were put together in great part in connection with a course of lectures to post-graduate students, is a monument of industrious research and of critical study which presents, in a concise and logical manner, the manifold data of the subject of glaucoma, the history of its investigation, and the practical management of the disease. Dr. Sterling's discussion of the various etiological theories is especially valuable, the basis of arrangement being clear and scientific. It is to be regretted that this important contribution to ophthalmology should be handicapped by inferior press work, and by indistinct half-tone reproductions of microphotographs. Many of the illustrations are practically unintelligible. The bibliography is unusually complete and well arranged, although a number of errors may be found in the list.

RADIOSCOPIE ET RADIOPHARIE CLINIQUES. Par le DR. L. R. REGNIER, Chef du Laboratoire d'électrothérapie et de radiographie de l'hôpital de la Charité. Paris: J. B. Bailliére et Fils, 1899.

THIS little manual gives, in a succinct and interesting review, the history of experimentation with static electricity *in vacuo*, and of the successive steps by which the nature of the cathodal rays, and later that of the X-rays of Röntgen, was determined. Succeeding chapters are devoted to the means of producing these rays by the Holtz machine, or by induction-coils, the preparation of photographic plates and the fluoroscopic screen. The application of these methods to special uses of surgery and medicine is fully discussed, the subject of fractures and dislocations, foreign bodies, osseous disease, and skeletal deformity being considered at length. The work just misses being extremely valuable. The illustrations of apparatus are good, but the mechanism employed is much more complicated than need be. There are a number of radiographs, reproduced by the half-tone process, which are so indistinct as to be practically useless for purposes of demonstration. This is the more remarkable when we consider the exceedingly fine results obtained of late in this field, and the sharp pictures in recent English and American publications. The practical management of X-ray apparatus is well presented, but the author seems to have overlooked all but French bibliography. This appears most noticeably in the chapters on foreign bodies in the cranial cavity, and on ophthalmic

radiography. Here the complicated procedures of Morize and of Contremoulin are described at length, only to conclude with an admission that the results obtained with them are neither exact nor conclusive. No mention is made of the excellent practical results obtained with much simpler methods by Williams of Boston, Clark, Hansell, De Schweintz, and Fridenberg, while the suggestion of the last-named writer to produce combination views, especially in cases of intra-ocular foreign body, by profile and "en face" radiography is credited to no one in particular, and initiated by a number of unpractical recommendations. It may be stated, in conclusion, that nowhere in this book do we find a definition of the X-ray, or any description of its physical characteristics, form of vibration, or mode of action, which might assist our understanding of the subject.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Cloth, 490 pages, 28 illustrations, and 3 colored plates. Philadelphia and New York: Lea Brothers & Co., 1899.

THIS new quarterly makes undoubtedly the best, completest, and most authoritative review of advances in scientific medical literature with special reference to its practical applications that has yet been made. The editor is to be congratulated on the set of contributors secured, the contributors on their thorough, painstaking work, and the publishers on the excellent combined result that editor's, contributors', and publishers' efforts have reached.

It seems almost invidious to pick out special parts for commendation from amidst the general excellence and we mention only some of the striking discussions of practical subjects. Dr. J. Chalmers Da Costa in the section of surgery of the head, neck, and chest gives thoroughly up-to-date reviews of the practical aspect of such questions as harelip, operations for brain-tumor, and for epilepsy. The possibility of successful suture of wounds of the heart is brought out and operative technic as gathered from successful operators in heart-surgery discussed. A very encouraging conclusion as to the expectancy of life after operation for mammary cancer is drawn from the collation of current statistics, and this very satisfying phase of the new surgery properly emphasized. The surgical treatment of idiocy is discouraged on clinical grounds and the utter uselessness of craniectomy except in extremely rare cases made clear from the best surgical experience in the matter.

Dr. Clackader of Montreal, in children's diseases collects some very practical points on two subjects that will be of special interest now that the warm weather is approaching, infant feeding and the treatment of diarrheas in children. Recent analyses have modified somewhat our ideas as to the constancy in composition of mother's milk and have suggested a doubt as to lactose being, the only form of sugar present in the milk. Gärtners modi-

fication of milk "*fett milch*," as the Germans call it, is given the place in the review that the popularity it has achieved in Germany and Austria entitles it to. In the diarrheas of infancy he says: "Recent writers agree that opium should be avoided at the outset of all forms of bacterial infection until the stomach and bowels have been thoroughly emptied by purgatives and lavage. It may then be employed *in small doses only* to relieve colicky pain and secure moderate rest. It is distinctly contraindicated where pain is not severe and where the evacuations are foul-smelling and ill digested and are not watery or very frequent."

Dr. Hektoen of Chicago in the pages devoted to pathology has a very interesting review of the burning questions on which so much work is being done in recent years. The present status of pathological theories with regard to inflammation is especially clear, concise, and complete in its brevity. The fifteen pages devoted to tumors show how much is being done on this subject, sometimes considered the most definitely settled chapter of pathology. There is an excellent colored plate of the streptothrix homini, the branching micro-organisms described recently by Flexner and certain German observers as pathogenic to man. There is a very striking illustration in colors, from Craig, of branching forms of the tubercle bacillus as found in the sputum and some suggestive material in the text as to the important question whether all of these branching micro-organisms have certain natural affinities that should make us conclude that in the microbial causes of the infectious granulomata we are dealing with a family of micro-organisms rather than distinct species.

In the chapter on the infectious fevers Thayer has a most valuable review of the latest practical conclusions as to the treatment of typhoid fever, especially as to the limitations of the bath treatment. Children, the old, the feeble, and those whose fever causes no symptoms are questionable subjects for regular tub treatment unless there are special indications. Under malaria there is an excellent review of the use of quinin in malaria with no halting half-hearted commendation of its free administration whenever there are unmistakable symptoms of active malaria no matter what complications may be present. There is a very judicious discussion of the significance and treatment of such complications as malarial hemoglobinuria and malarial nephritis, and a good review of the recent work on the estivo-autumnal type of malaria which has of late acquired so much practical interest for Americans.

THE SEXUAL INSTINCT; Its Uses and Dangers as Affecting Heredity and Morals. Essentials to the welfare of the individual and the future of the race. By JAMES FOSTER SCOTT, B.A. (Yale), M.D., C.M. (Edinburgh). Late Obstetrician to Columbia Hospital for Women and Lying-in Asylum, Washington, D. C. New York: E. B. Treat & Co., 1899.

The preface of this book begins with the quotation from Descartes, "If it is possible to perfect mankind the means of doing so will be found in the medical sciences."

With an aim as high as is thus implied it is needless to say that the author is thoroughly justified in treating perfectly plainly a set of subjects that are unfortunately too much tabooed and as a consequence too little understood in our day. The book, intended, as the author says, primarily for laymen, not for women and boys, contains a good deal of plain talk, which, however, we cannot but think will be always wholesome in its effect.

Some of the chapters, as "Woman and the Unmanliness of Degrading Her," "Prostitution and the Influences That Lead to It," and "Criminal Abortion," form excellent practical résumés of elusively detailed subjects not easy of condensed treatment.

We are inclined to think that the tendency to preach in the book is a little too pronounced. The facts of the matter are so striking that we consider their simple presentation more forcible than any rhetorical argument and additions of this kind weaken the effect by their apparent approach to special pleading.

ACROMEGALY. An essay to which was awarded the Boylston prize of Harvard University, for the year 1898. By GUY HINSDALE, A.M., M.D. Reprinted from *Medicine*, Detroit, 1898.

SINCE Collins' critical digest of the literature of acromegaly appeared in 1893, no work of any considerable size on this most interesting condition has been published in English, although both the home and foreign literature has been very rich in reprints of cases and in studies of the disease; hence Hinsdale's work is particularly acceptable. It reviews, in a very thorough manner, all the literature on the subject which had been given out up to the date of its publication. The style in which the paper is written is especially commendable, and the arrangement and indexing is logical and convenient. The illustrations are chosen with discrimination and are fairly well reproduced: unfortunately, however, the plates give but few instances of the microscopic pathology of the disease. The greater number of the plates have been previously published and are now thoroughly familiar to those conversant with the literature of the disease. No new cases are reported, but the author includes an excellent study of the skeleton of a giant, probably an acromegalic.

While Hinsdale has very carefully reviewed the literature of acromegaly, he has presented but very little original material and no doubt the weakest points of the paper are the discussions of the etiology and pathogenesis of the malady. Nothing new or encouraging in the treatment of acromegaly is advanced. The long and complete bibliography which closes the paper will be found of great service to those who desire to become thoroughly familiar with the disease.

A PRACTICAL HANDBOOK ON THE MUSCULAR ANOMALIES OF THE EYE BY HOWARD F. HANSELL, A.M., M.D., Clinical Professor of Ophthalmology in the Jefferson Medical College; Professor of Diseases of the Eye in the Philadelphia Polyclinic, and WENDELL REBER, M.D., Instructor in Ophthalmology in the Philadelphia Polyclinic. Philadelphia: P. Blakiston's, Son & Co., 1899.

THE subject-matter of this little treatise is an elaboration of a short series of lectures delivered in successive winter courses at the Philadelphia Polyclinic, and designed to present to beginners in ophthalmic work the principal facts in the diagnosis and treatment of abnormal states of the eye-muscles. An introductory chapter presents concisely yet fully the important facts necessary to thorough understanding of the structure and innervation of the ocular muscles, their relations to the orbit and to the globe, and their dynamics. This is followed by a consideration of structural anomalies and of the functional derangements, the numerous "phorias" and "tropias." The functional tests for these conditions are described with the aid of numerous illustrations in the text.

Concluding chapters deal with the operations of tenotomy and advancement in a rather superficial way; the mechanical principles involved, their bearing on muscular dynamics, and the question of "dosage," of the operative effect, are practically neglected. In the after-treatment of tenotomies the use of a conjunctival suture is said to be "an unnecessary precaution for a skilful operator," and "a bandage is seldom useful; on the contrary, it may be positively harmful, in that, in the exclusion of binocular fixation, the important factor to success, namely, the unconscious effort at fusion, is prohibited." These statements will hardly go unchallenged. While following quite closely the classification and views of Stevens in regard to functional deviations, the authors vigorously reject his claims and those of Ranney as to the causation of reflex neurosis by muscular anomaly.

It may be well to repeat that "such cases are exceptional in even the largest experience, and the theory that a considerable proportion of the insane, of the epileptic, of the choreic, owe their disease wholly to the existence of either a refractive error or a consequent muscular anomaly is dangerous and unsound."

THERAPEUTIC HINTS.

For Eczema of the External Auditory Canal.—Clean the ear, not with soap and water or other fluids which are generally deleterious, but with the ointment given below, using cotton on an applicator. Then apply the same ointment freely to the walls of the canal. Attention to the general health is of course indicated.

B. Ac. carbolici : : : : gr. xx
Ung. zinci oxidii : : : : 3*i.*

M. Sig. External use.

For Acute Nephritis During Mumps.—Irrigate the colon with hot saline solution to induce activity of the kidneys and give the following medicine by mouth:

B. Hydrarg. bichlor. : : : : gr. i-iii
Potassii iodi : : : : gr. xx
Syr. simpl. : : : : 3*i.*
Inf. gentianæ : : : : 3*vii.*

M. Sig. One teaspoonful three times a day.—*Kerley.*